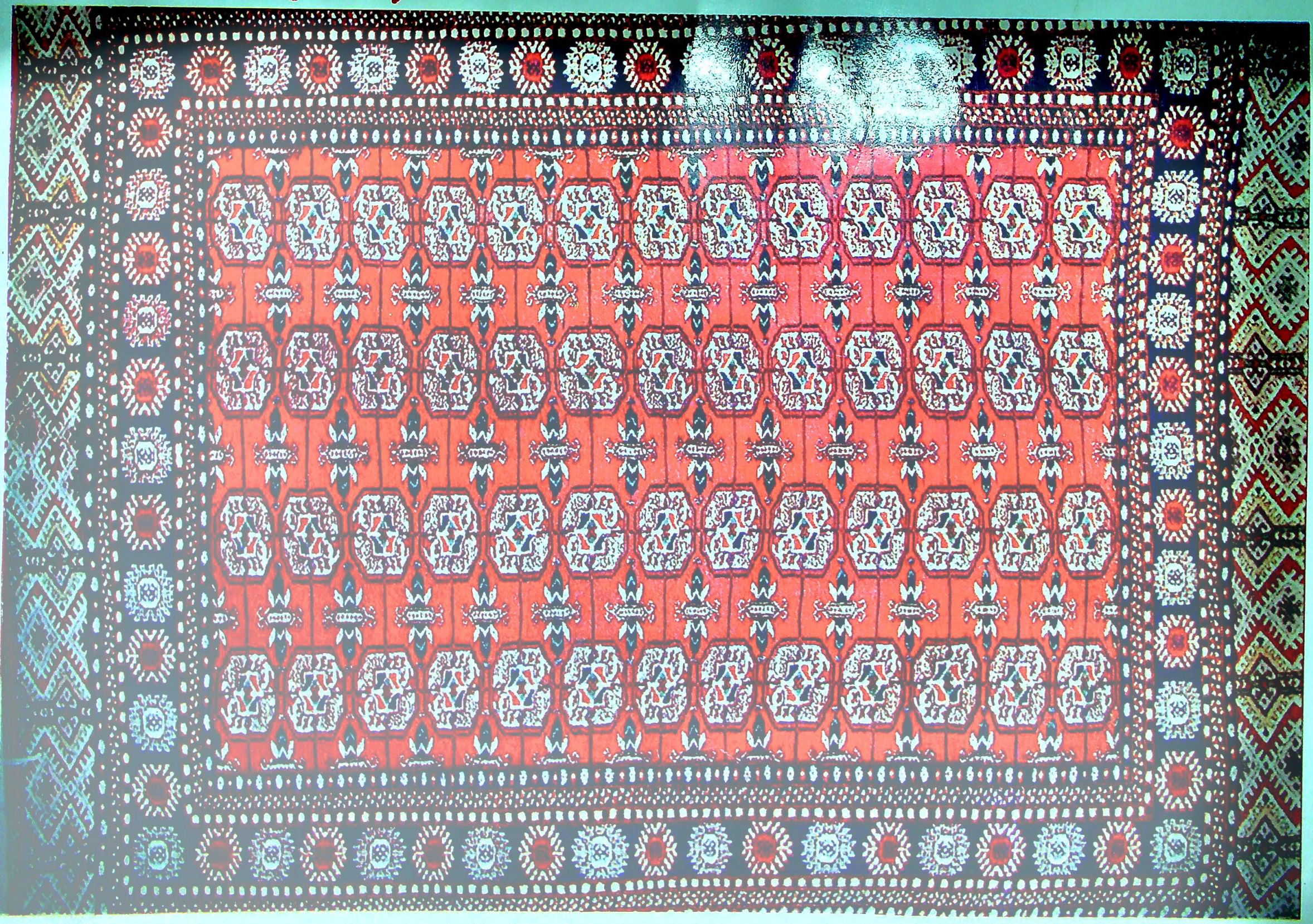
Mărq

CARPETS OF INDIA



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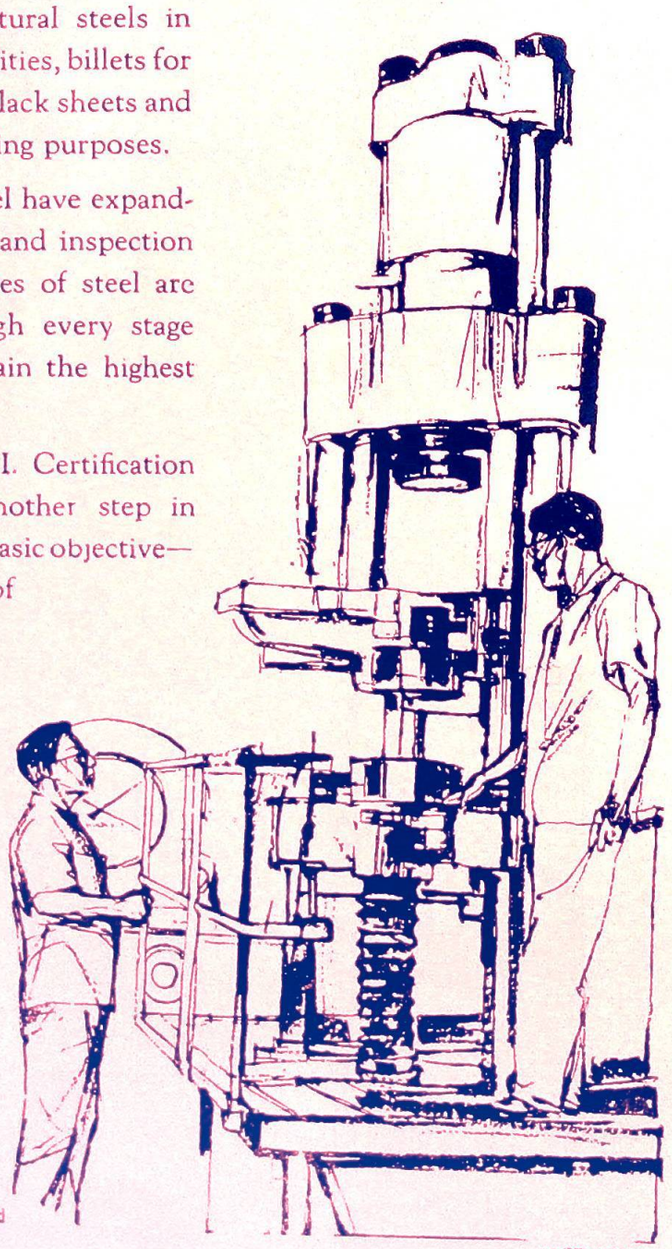

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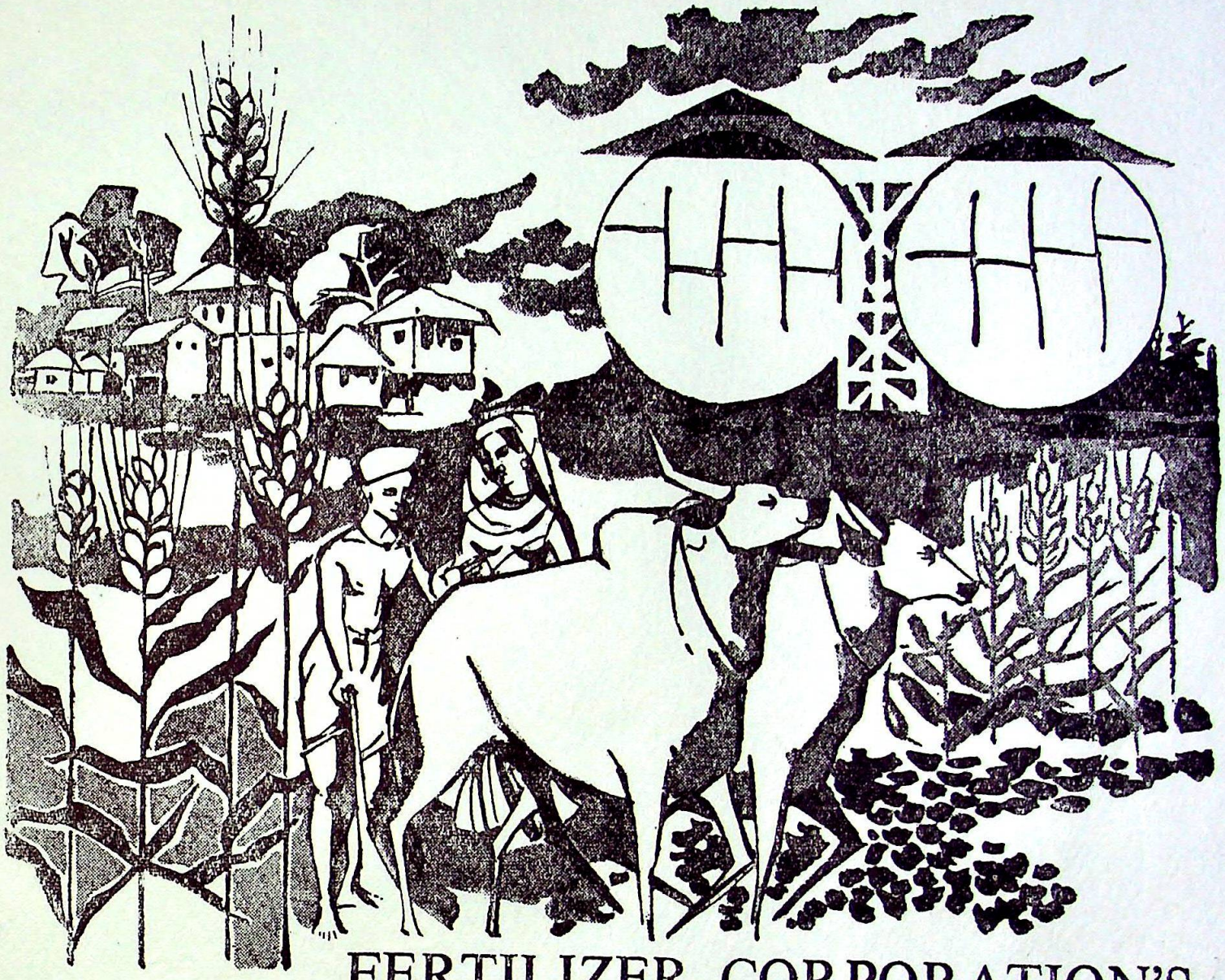

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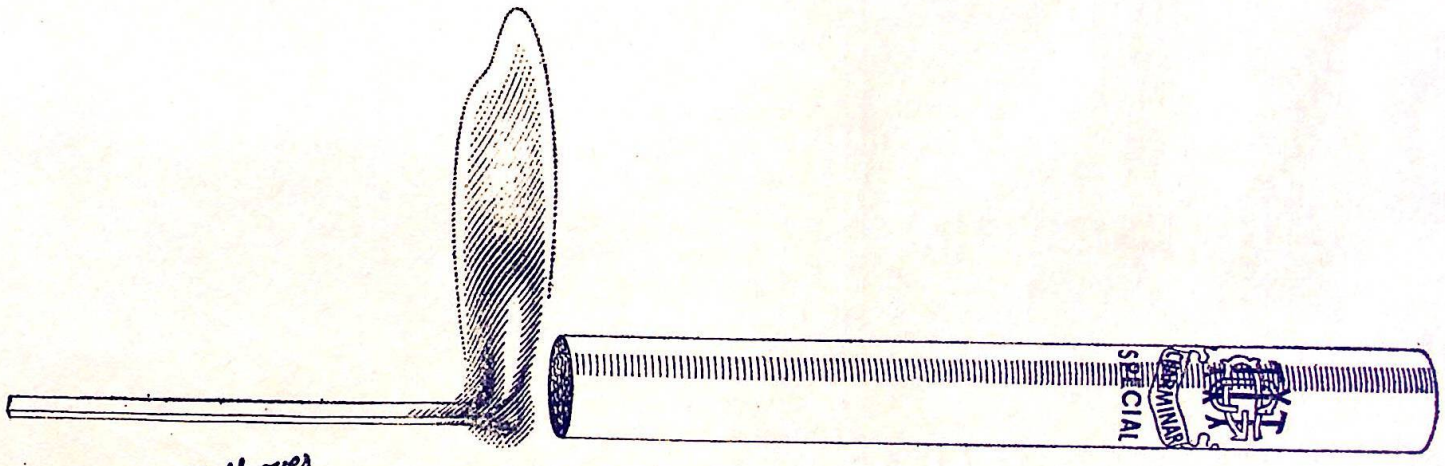

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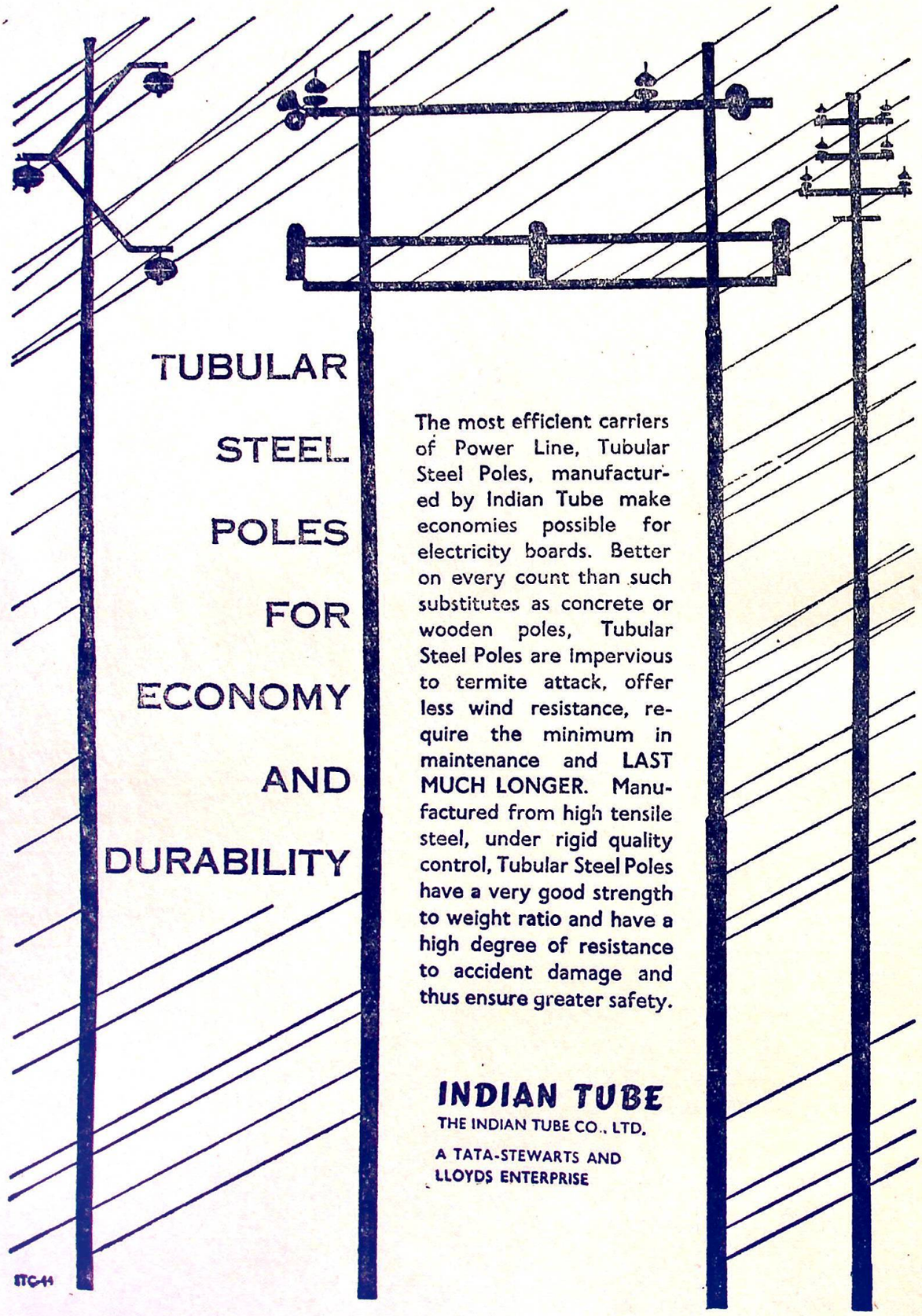

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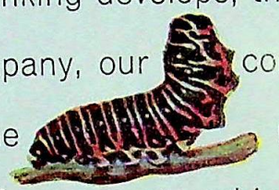

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A Magazine of the Arts

VOLUME XVIII SEPTEMBER 1965 NUMBER 4.

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The entire layout of this issue has been carried out by D. H. Sahiar.

Cover : Mouri Carpet from Amritsar. Courtesy, All India Handicrafts Board (Photo by Jasleen Dhamija).

MARG invited Smt. Kamladevi Chattopadhyaya and Smt. Jasleen Dhamija to be guest editors of this special number, devoted to the Pile Carpets of India. This is a rare issue, the like of which has not been published since F. H. Andrews and Col. T. H. Hendley put down their notes on the subject about two generations ago. The collaboration of the guest Editors, as well as of Messrs. Charles Grant Ellis, John Irwin, Shri H. K. Wattal and Dr. P. N. Kaul, who are important experts in this field, has rendered possible a compilation which will help to stimulate the taste of the public in the finer values of this craft—which almost enjoys the status of a fine art in the world.

MARG wishes to thank the All India Handicrafts Board for the unstinted help they have given us by loaning colour blocks and affording many other facilities.

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CARPETS ARE

Few crafts even among textiles which are imbued with many a stirring romance, can equal the pile carpet for its unusual quality and allure. An object which has held its status and fascination for over two thousand years, nay increased its power and value even in the present machine dominated world, can hardly have another compeer to challenge. Museums the world over have competed for the possession of pile carpets and readily paid fabulous sums in the process. That the traditions of the original regions still continue to dominate world taste is borne out by the fact that carpets in the Persian, Turkish, Caucasian and Central Asian designs still continue to command the market, no matter where they are actually woven. This is one of the rare crafts which never seems to get dated. Even though in periods, changes and modifications have crept into these designs, basically the 16th and 17th century designs have continued to influence the weavers, and, even where they had been changed, they have often rallied back to the original and buyers of taste the world over have coveted and prized them.

Historically, the Indian pile carpet seems to go back to about the 16th century. But as compared with the elaborate and highly descriptive material available on the various noted carpets of the rest of the Orient, one is appalled by the paucity of information on the Indian carpets. Much data and detailed history of the various carpet centres are completely lost, which now it has become too late to collect, as the sources themselves have vanished.

While at one time pile carpets were manufactured in a great many places all over India, today they have shrunk to only a few centres which remain noted for their carpets. The old aura, flavour and grandeur which the carpets lend to their centres of origin, have melted away, leaving an arid desolate atmosphere. Economically the carpet weavers are still caught in the lowest income rungs. The attention the carpets are receiving now is wholly because of their export value rather than the intrinsic merit of the object. The interest in carpets is therefore bound to be superficial and not conducive to the revival and rehabilitation of carpets as a craft of rare beauty and elegance. The predominantly commercial approach to carpets must in the long run bring ruin and disaster to a great art.

Iran holds before us a commendable example. At one time carpet-making had become so commercialised there that the great tradition built over centuries, was on the brink of ruin. After World War II with the rapid spurt of nationalism and a reorientation in the approach to the traditional heritage, Iran began to retrace its steps. While modernisation of looms and techniques is considered necessary, the cheap designs sent out from the Western commercial houses are being replaced by genuine, indigenous, especially the world renowned traditional ones.

If climate were a deterrent to the popularity of carpets in India, surely they could not at one time have attained very high status or commanded the demand which they once did. The answer must lie elsewhere.

WORKS OF ART

The high class carpet was no doubt more a luxury item. This does not mean luxury items have lost their demand. In spite of many adverse factors, there is still a class which lives luxuriously in Indian terms. These householders spend, one may aptly say, waste, enormous amounts on furnishing their houses or apartments. But there has been so much unsettling in our tastes, there are hardly any standards left, much less standards built up. It is usually the contractors attached to firms that do the furnishing. Most of them have little or no art education, leave alone aesthetic sense. They are mostly guided by commercial agencies who advertise themselves as experts. The main criteria is the high fees they charge and the fantastic rates at which items for furnishing and decor are priced. The result has been a rapid deterioration in our tastes. Pandit Nehru bemoaned this on many an occasion, "It is quite extraordinary how people are losing any real appreciation of beauty", he said.

It is not that carpets are not used. But they are without any special character, and are meant to cover up the floor rather be an object of art. As Sir George Birdwood so rightly said: "Few people seem to be able to realise that when buying Oriental carpets, they are in fact choosing works of art, and not manufacturers' piece goods produced at competitive prices". Formerly, the weavers did their utmost to produce designs which had pleased patrons and customers over centuries and decades, and workmanship which brought admiration and acclaim for its excellence. But today there are very few who have retained or cultivated their taste or their sensitivities to subtle beauties. The ordering is done by middlemen who have no cultivated taste. They are just commercial brokers whose main concern is to beat the weaver's rate down. The weavers also, therefore, reduce the quality of their work to the tariff of charges incorporated in the order form as said to be ruling the market.

It is a ridiculous irony that wherever objects of art wither and die people should sigh and grow nostalgic for the feudal lords, the backbone of landed aristocracy, a system we strenuously fought and did our best to liquidate. Has all our struggle for democracy and socialism been in vain? Must the artisans and craft-lovers continue to believe that, with the passing away of a shadowy social pattern that had no reality in the new structure we are building up, there is no room for the rare beautiful things? Is it not for the nation and its worthy leaders to offer a liberal and generous patronage to our great heritage of arts and crafts? Is it not our sacred duty and responsibility to see that it is not said over and over again that with the passing away of royalties and zamindaris, our cultural heritage has almost evaporated? Are we to stand self-condemned before ourselves? Can't the noble carpet industry be rescued from its present malady and be restored to its rightful glory?

The present moment offers a great opportunity for breathing real life into this noble product in our country. The country has become very craft-conscious and a growing awareness and interest in the crafts is discernible. The century old Western market for carpets that had been disrupted by the World War, has rallied back with a swing. As European economy has made its rapid recovery after the last War, the demand for luxury goods has kept rising, amongst which the pile carpet finds an honoured place. We ourselves can improve our taste....

—K. C.

ORIGIN OF PILE CARPETS AND THEIR DEVELOPMENT IN INDIA

by Kamaladevi Chattopadhyaya

There seems to be no documentary evidence to prove the antiquity of the Indian carpet. Excavations by Dr. Stein in Eastern Turkestan revealed evidence of Indian merchandise, even as of Indian influence, important among them being some unique wooden documents. Of them an oblong tablet, dated in the ninth year of King Jitroghavarsham relating to commercial transactions by a certain Buddhaghosha attached to a Buddhist Monk Anandasena, wherein some household articles are enumerated in which mention is made of sheep and wool weaving appliances as also *Namdis*. This is accepted as the earliest reference to what we know now as *Namdas*, made from pressed wool, a sort of felt.

The Indian name for the pile carpet is *Galicha*. Its recorded history seems to start in the 16th century around 1580 A. D. when the Moghul Emperor brought some Persian carpet weavers from Persia into India and set up the royal workshop in his own palace and commissioned them to produce carpets equal to those of Persia. Thus the Indian pile carpet began to take shape. The carpet weavers were given all facilities and treated with respect and honour. Several of the best specimens of the carpets produced in this royal workshop now adorn the walls of several museums in the West. One of the earliest and most noted amongst them was given as a gift by one Robert Bell to the Girdlers Company, London, in 1634, when he was master of that Company, and with whom it now lies.

These carpets speak eloquently for the superb workmanship displayed by the weavers. Like all countries where people rich and poor alike, habitually sit on the floor, floor coverings of all types were bound to be evolved with imagination and aesthetic sense.

While Akbar introduced the art of pile carpet weaving, in silk and finest wool, with floral, animal and bird designs, the great tradition was continued by his successors, Jehangir and especially the beauty-loving Shah Jehan during whose reign these carpets gained renown even outside India

The best pile carpets seem to have been woven during the reign of Akbar, Jehangir and Shah Jehan. Carpet factories came to be set up in Agra, Delhi, Lahore, etc. These carpets being of Persian origin and the weavers from that land, it was natural that the early designs should be patterned on the Persian. Thus the traditional designs were largely confined to Kiraman, Kashan, Isfahan, Herat, etc., with some in Kashmir doing the Central Asian, like Bokhara. The weave was naturally in the Persian or *senah* knot.

By and by the houses of nobility also ran looms with expert weavers preparing special designs to suit the individual fancy and varied tastes of these patrons. Commenting on this Sir George Birdwood wrote: "The Princes, great nobles and wealthy gentry, who are the chief patrons of these grand fabrics, collect in their houses and palaces all who gain a reputation for special skill. They receive a fixed salary and daily rations and are so little hurried in their work that they have plenty of time to execute the orders. Their salaries are continued even when through age or accident they are past work; and on their death on to their sons, should they become skilled in their father's art. Upon the completion of any extraordinary work, it is submitted to the patron and some honour is conferred on the artist and his salary increased. It is under such conditions that the best art work of the East has always been produced". In these carpets the floral designs were presented in rows of flowering plants each delineated separately and entirely down to the roots as if planted in a garden. In the animal patterns the figures were full of life and energy. The presentation of figures pressed them on toward the pictorial, while with the floral motifs through a distribution of colours that helped to model the subject, obtained plastic effects rare in carpets.

In the *Ain-i-Akbari*, in the reference to carpets it is stated that there were wonderful varieties and charming textures and that "the carpets of Iran and Turan are no more thought of". There is ample testimony to the excellence of these products of the Moghul period. Some of these are in the Jaipur museum, some of the best are,

however, in the rare collections in London, especially in the Victoria and Albert Museum, and museums in Europe and U.S.A. These carpets were admitted as having almost an unconscious subtlety about them. It was considered difficult to analyse the secret of the harmonious bloom of Indian textures even with the aid of Cheorcul's prismatic scale, and it is only through generations of patient practice that men attain to the mystery of such subtleties.

The Ardebil and Herati are two other designs to be found in these early carpets. In the latter there was something regal in the great curves and bold strokes of the designer, who seemed to command ample breath, delicate proportion of the field to border, along with extreme closeness of the stitches without creating an oppressive crowdedness, as well as the skilful chorus of the colours in outline. According to F. H. Andrews these earliest examples are remarkable for the boldness of the curving stems and soft, cool harmony of the colours, in which is found a good deal of a fine green and deep blue. The border consists of broad band, separated from the centre and edged on the outer side by one or two very narrow bands. On the broad band, bold and highly conventional flowers alternate with long serrated leaves carried on delicate and graceful undulating stems. The most striking features in all these early carpets is the appreciation for the ground and the proper restraint in the pattern. The work never looks too crowded and there is always a proper proportion of border to field. One of the most striking features is the skilful choice and use of outline colours.

Carpet industry thereafter seems to have grown rapidly in India and spread from Kashmir to Tanjore and become deeply interwoven with the other weaving habits of the people. Though started as a copy of the Persian, the pile carpet industry gradually became Indianised, taking on a character of its own.

Sir George Birdwood, a keen student of Indian Arts and Crafts of his time referring to various Indian carpets, says: "In all these carpets the first thing to observe is the complete subordination of the decoration to the surface. A carpet presents, of course, a flat surface and the decoration in these Indian carpets, it will be seen, is never allowed to disturb the impression of their flatness. This effect is obtained by representing the ornamentation on them in a strictly conventional manner, and without shadow. The next to observe is the skill with which the ornamentation is distributed, nearly always in a symmetrical manner, and with such perfect balance that even where it is most crowded there is no effect of overcrowding. Then it is interesting to notice the wonderful variation of the same ornamental forms in all these carpets. No two of them present in the details of their decoration actual repeats of each other, yet in most of them it consists of the knop and flower pattern, that is, of the lotus bud and lotus flower, which has been the universal form among the Asiatic Aryans from the beginning of their art history."

This seems to be indeed a basic principle in all Indian Handicrafts. The shape in designing is always the most important, everything else is secondary. The defect in the lines is never sought to be covered up by ornate decoration. The shape itself has to be perfect.

The Indian love of nature, of animals, birds flying or on trees, etc., so evident in Indian paintings, naturally found their way into carpets. There are all over designs of scrolling stems, leaves and finely drawn giant flower heads within a panel head. All oriental designs are supposed to have some hidden meaning, such as: Circle is the Eternity; Zigzag, water and lightning; Swastika the Guiding light in darkness; meandering line is Continuity of life; the Tree is Bounty. Normally a carpet had to convey the two symbols of eternity and transitional change.

Types of Carpets:

The pile carpets in India are mainly manufactured in two varieties of yarn, hand spun which accounts for forty percent of the production and mill yarn used in sixty percent. As both the durability and beauty of the carpet depends on the quality of the wool used, the raw material is equally important with the type of weft and the quality of the knots. While India has a fairly large production of wool suitable for carpets, the better quality wool which used to be mixed with Indian, gave a sheen to the carpet. For the time being at least the finer wool has to be imported. The production of carpets, barring a few factory ones, is done on cottage basis.

Carpets and rugs made in India may be divided into five kinds, the cheapest having the warp and wool of cotton, with blue, red and white stripes, and known as *Suttrangies* made all over the country, they are generally considered hard, as cotton when driven home with the wooden comb forms a hard, unyielding body but it still has the advantage of making the pattern stand out sharp and distinct. Another kind is made with the warp of cotton and the woof of wool. The loom employed in weaving these two kinds is horizontal, without either treadles or reeds. Another kind is made of cotton warp and woof with a short pile of cotton worked into it. This necessitates a different kind of loom; the warp is placed vertically and the various colours employed to form the pattern hand down from bobbins between the warp and the workman; the woof is passed by the hand and then driven home by the comb. The fourth group is that in general use, with the pile of wool, the warp and woof being either flax, wool or cotton. The fifth is of silk pile, with flax, wool or cotton for warp and woof. The last named has a richness of its own with few equals. A fascinating range in variety has been provided by each region or centre making its own distinctive speciality. We are here only dealing with the pile carpets.

The patterning of the carpet:

The working designs of carpets are usually drawn on section paper and generally to a scale equalling in fineness the count of the carpet to be woven. Each square represents a knot or rather the two ends of the pile. The diagram is for the convenience of the weaver, usually in the full size of the pattern to be reproduced and shows either a half, a quarter or an eighth of the design on the carpet. But in the case of an all over diaper or repeat pattern, the repeats are usually in square or oblong blocks. Both the "drop" and the "turn over" forms of repeat are in frequent use and in some cases a combination of both these forms of repeat gives excellent results.

Border designs are selected for their value and appropriateness, as settings or framings for the main or ground patterns of a carpet and usually for the possibility of their repeating horizontally in fairly long lengths and for making corner effects without the straining of their general decorative effect.

The method of transferring designs to the weave is done in northern India in Srinagar, Amritsar by the employment of the technique of *Talim* which is said to have been borrowed from its use in shawl weaving. The *Naqash* draws the actual design on a plain piece of paper, then draws squares in red, each square is expected to represent five stitches. Then the colourist marks down each colour on this graph. The scribe has then to write each single stitch of the carpet with the guidance of the graph together with the colour of each knot in every line. The reliability of the *Talim* scribe lies in being able to spread the five by five square into separate lines. The enormity of this task may be comprehended when we realise that in a big size carpet the knots may run into millions. These directions are recited in a sing song style, which is equally complicated as on a large composition there may be upto twenty weavers at work. With the introduction of the graph paper the designer uses one square as a stitch. This makes for a more accurate designing, eliminating mistakes. These scribes have simplified *Talim* writing by dividing the *Talim* into units according to the number of stitches in the carpets. An *Aliph* separates one unit from the other. This makes for further accuracy.

In the traditional carpet designs the floral patterns occur mostly in natural form but the rectilinear always influences the flowing lines of nature. Floral forms of ornaments found in carpets are amongst many other, the Tree of Life, the Lotus, the Rose, the Poppy, the Scilla, the Tamarisk, the Myrtle, the Henna, the Crocus, the Narcisus, the lilies. One finds too, the various parts of these plants, foliage, roots, seed vessels woven into the carpet. All these as well as the flowers are depicted in their natural colours. In the old carpets the colours used were the "Perfect Seven" as the basic traditional colours were known. A wide range of animals are also found in the old designs; but much more in the North than the South. Amongst birds, the dove, the blue pigeon and the peacock had a place.

In the South the carpets in Elluru and Warangal have the Persian and Caucasian-Anatolian influence still in their designs. But the colouring is original. The leading feature is often formed by reds, broken by quaint still flowers of conventionalised leaves in which orange generally predominates. Cool blues, greens, soft yellows and creamy whites form the usual colour scheme.

INTRODUCTION OF FINE CARPETS IN WORLD MARKET

During the 18th century the Indian pile carpet reached Europe. Its appearance at the London Exhibition of 1851 put it for the first time on the global map and gave it a prominent place in the Western World. Not only did it attract attention there, but traders traced it back to its place of origin. Soon a few carpet manufacturing firms opened their factories at Srinagar, Amritsar, Mirzapur, etc. This in a way marked the organising of the carpet production on modern lines in India.

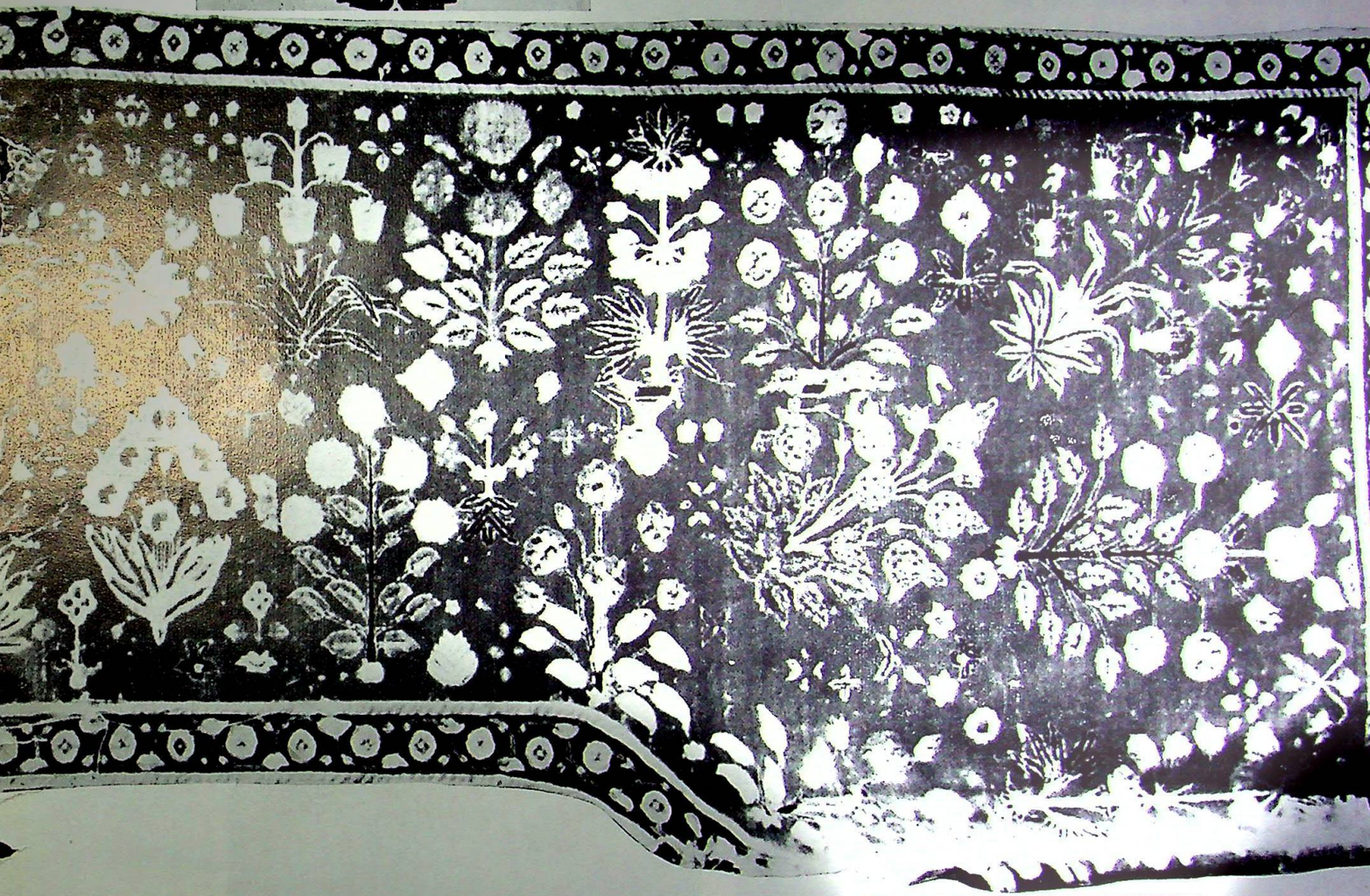
But disaster overtook the designs in course of time. The original Kashmir and Persian designs were bound to decline with age. The virility and strength within the industry seemed to be failing to renovate itself. This lay it open to alien encroachments as carpet importers from the Western countries started sending their own designs to be woven here. Soon interior decorators also joined them. In colouring too deterioration set in. Harsh and garish combinations were introduced and colours became rigid, flat and uniform instead of slightly broken, varying and blending in shades. Changes were made without care and thought, upsetting the balances and harmonies evolved over the centuries. Often it was not even a poor copy, nothing but a shoddy debasement of what once was beautiful and elegant.

The fancy of some of the Westerners for antiques also led to fakes with artificially faded carpets being offered for sale in place of the vibrant and limpid colours of the old master-weavers. The highest watermark of this commercialism in Indian carptes was the immense rolls of the plain unfigured carpet material turned out for sale by the yard, like it were a linen fabric.

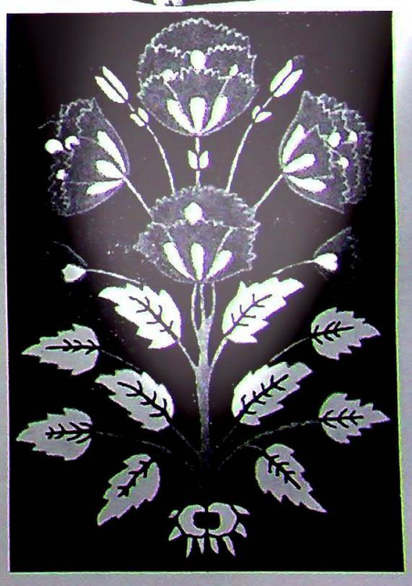
DESIGNING IN INDIAN CARPET

Designing is an important and integral part of a carpet even as much as the colouring, for it is this that infuses life and both excites and soothes the carpet users. We have noted that as carpet production got more and more tied up with export (and in course of time this aspect became more dominant) the designs began to get unsettled under diverse foreign demands. Thus as export still dominates carpet production, the same situation continues. The range is from the delicate Persian to the sturdy Central Asian, from the reticent English Queen Annish to the quiet French Aubossan. Here are some of the nomenclatures used in our carpets, which don't ring true, and are more confusing though colourful: The Taj Mahal carpet is usually in plum, ivory or any tint; Savonnerie, originally a French hand-made pile rug, is now made in India. Nordick has simple straight lines, few colours. In gold and white, green and white are the Kandhar carpets. China is the name for carpets in Chinese designs. Sirdar is another rug made for export in plain soft colour, in hand-embossed or hand-carved borders. It is in rose beige, honey beige, ivory and soft green.

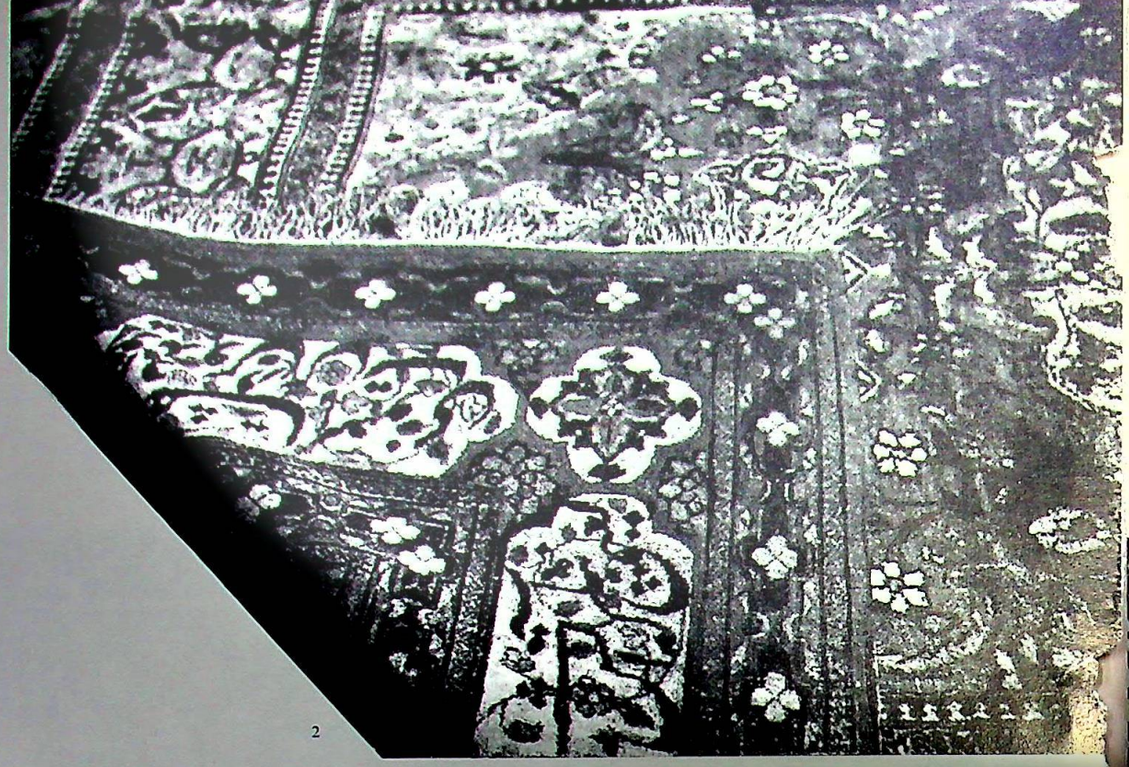
We have still not worked creatively and consistently on evolving typical designs that stand out as Indian in an International medley. It is not for want of designs or creative ability but lack of serious attention. The All India Handicrafts Board made a start in this direction but it is not purposeful or deeply creative enough to show the required results. Carpet designing calls for a special eye and talent. For it has to be armed with qualities that can overcome the disadvantage of having to go flat down on the floor. The design must be such as can stand up even while the carpet lies inert on the ground. This is where the traditional Oriental designs have succeeded in triumphing over the modern ones and are able to make alive the room with their presence and suffuse it by their cold steely or



1. *Jaipur Carpet 1101 Hijri 1689 A. D. Produced specially in the Lahore factory for Jamandir—one of the principal apartments of Mirza Raja Jai Singh at Amber. The carpet has two lengths on each side leaving a space in the centre. It was perhaps meant to go around the throne. Collection: H. H. of Jaipur. (Photo—Ram Dhamija.)*



Flower motifs from Jaipur City Palace Museum Carpet in the collection of His Highness the Maharaja of Jaipur. The floral motifs are typical delineations found in the paintings of the period. The stylisation gives the characteristic quality of the plant. The shading and the colouring suggest the idea of creating a depth in the design. (Photo—Ram Dhamija.)



2. *An interesting carpet in the collection of Salarjung Museum. This is an unusual two-sided carpet. The pile has been worked on both sides and the design on each side is quite different from the other. It must have been originally made to be used as a door-hanging. One side has an inscribed border with the Saroo (cypress) tree, in the other a flowering tree and a pond with fishes swimming in it. The design shows that it was not meant to be spread on the floor but to be seen hanging on a wall. (Photo—Jasleen Dhamija.)*

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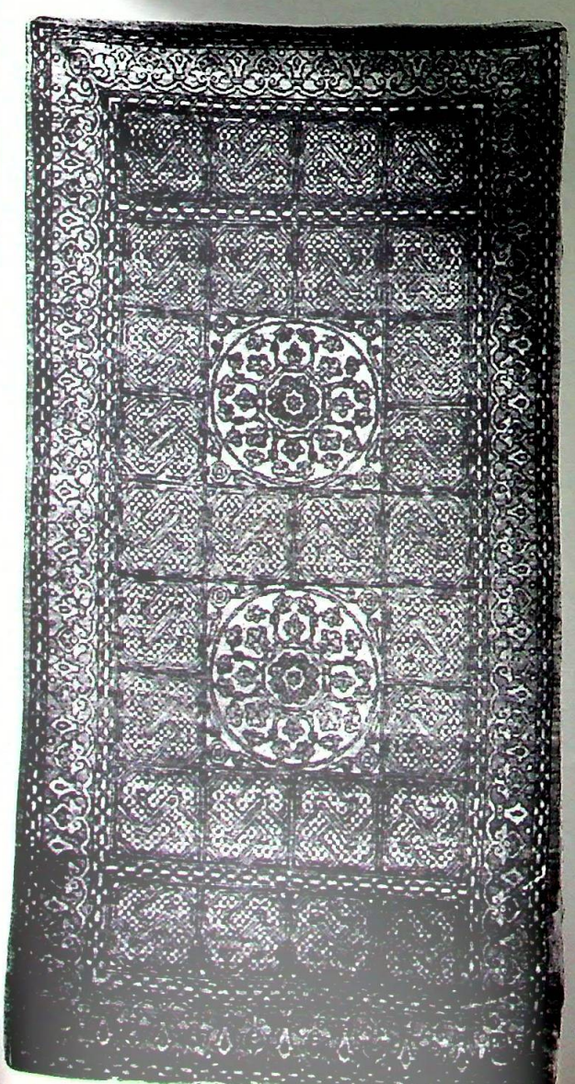
3. *A prayer carpet—Salarjung Museum. No provenance has been given. It appears to be an Indian carpet from the manner in which the pattern has been evolved. The tree of paradise with bold flowing pattern symmetrically worked springs from a vase, Chinese in inspiration but Indian in its execution. The lotus motif worked near the vase appears to be typically Indian. (Photo—Jasleen Dhamija.)*



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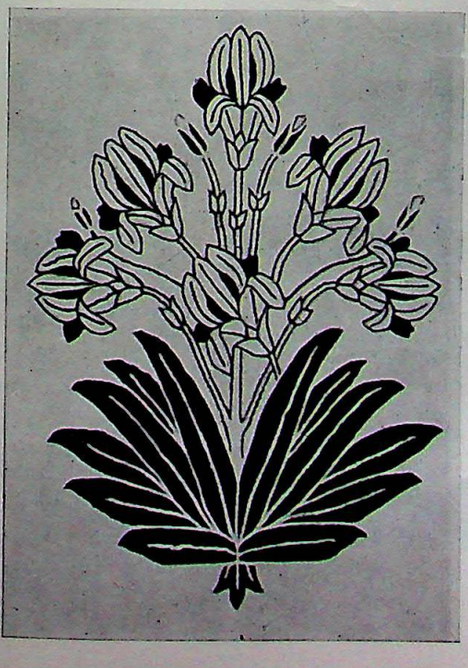
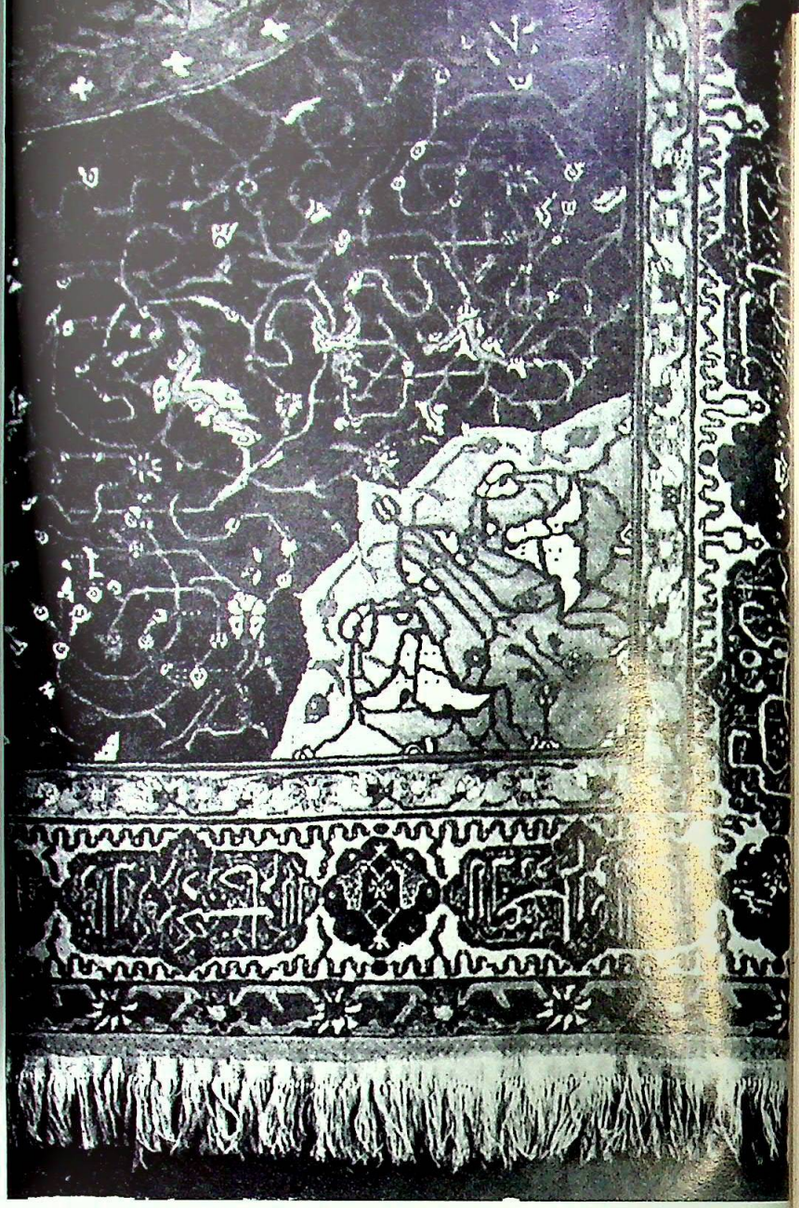




4. *An interesting carpet in the collection of Salarjung Museum. Provenance has been shown as either European or Indian which seems a little strange. The over-all pattern gives an impression of a Central Asian design. If however the design is defined it appears to be an Indian product. The border is derived from lotus buds, a typical border motif to be found in the buildings of Shahjehan period. The same motif has been used to make the circular pattern inside the carpet, which in a Central Asian carpet would have been based on the Padam lotus design. The ground is filled in by the basic pattern of the Swastika. The carpet appears to be a typical Indian product based on the distribution of motifs in Central Asian carpets. (Photo—Jasleen Dhamija.)*

5. *Detail of a carpet—Salarjung Museum. Provenance not known. It is likely that the carpet could have been manufactured in the Lahore factory. Interesting feature of the carpet is that the inscriptions on the border cannot be easily read and the construction of the writing is strange as though the person who designed the carpet and those who wove it did not understand the language. (Photo—Jasleen Dhamija.)*

6. *Details from the Chelsea carpet, Victoria and Albert Museum, London.*

7. *Detail from Persian carpet, Victoria and Albert Museum, London. (Photo—Ram Dhamija.)*

warm flushed colours. Much more will have to be done to be able to build up a definite image of an Indian carpet. Only in some of the smaller production centres do we find some worthwhile traditional Oriental designs. They too are in decline.

From the early days of the British rule a tendency had been growing to introduce carpet weaving in prisons to provide the long-term prisoners a dependable vocation for earning their livelihood. Later this became an established feature and more and more prisons came to introduce carpet weaving. The well-known carpet lovers led the opposition to this. They were convinced that this would injure the carpet industry, since the prison carpets would provide an unfair competition. Moreover this institution also bypassed the highly skilled traditional weavers hailing from families which for generations had done nothing but carpet weaving. All in all it seems that the prison carpets also added to the other factors which aided in the decline in the carpets.

CONTEMPORARY SITUATION

Although carpet weaving is done all over the country, the pile carpets are at present confined to about 20 centres spread over 7 States. In this, Uttar Pradesh leads with about 10 centres, manufacturing something like 90% of the entire production. The total number of workers connected with the carpet industry are estimated around a lakh, weavers being in the neighbourhood of 44,000 of which 33,000 are said to be in Uttar Pradesh and the rest of the 10,000 in other centres. The production figures for 1964-65 are in the region of 13, 32,263 sq. metres to the value of Rs. 4,70,00,000.00.

The public shows little or no interest in its survival. True, pile carpet may not figure in a big way in the nation's everyday life because of our tropical climate. Nevertheless, it is an object of rare beauty, a unique product of great prestige value. Several other low ranking or unknown places have received recognition only because of the lovely carpets they produce.

What remains today of this splendid craft is merely a shadow. It rests on weak foundations and is undermined by disorganisation. Because of these disabilities, the position of the workers too is depressed and unstable. Although there is an association of the carpet manufacturers, it seems to be ruled more by competition than by a spirit of co-operation. These weaknesses are spotlighted by the fact that out of our total exports in the field of wool, the manufactured items account for 6½ crores while the export of plain wool goes upto 9 crores. The monumental pile carpet, which once ranked with the gems and jewels in a family, is today like a mansion in ruins, with its noble reputation in the dust. Even the fact that it is such a sure foreign exchange earner does not seem to have benefited it in any appreciable manner. On the contrary this has led more and more to cheap commercialisation to its detriment.

Bhadohi—Mirzapur, U. P.:

Uttar Pradesh has the greatest concentration of carpet weavers and largest number of centres of production with Mirzapur, Bhadohi, Khamaria and places around leading in carpet weaving. It has been for long the most important market for carpets with a great reputation. Situated amidst a cotton growing area, it is not surprising that it should have developed as a big weaving centre. It is said that originally Bhadohi was the leading place. But as more foreigners began to take interest Mirzapur came up. The latter attracted foreigners partly for its better climate as well as for opportunities for hunting game that it offered. It seems at one time to have offered high class carpets in fine vegetable dyes. At the Paris Exhibition of 1867, Mirzapur carpets won acclaim. Even when coarser wool was used designs which showed well in the rough texture made them attractive and desirable. Evidently some Persian designs were also used. Today, however, it makes the coarser variety of carpets. Sometimes, they do weave upto 100 knots per square inch and the manufacture in better grades is going up, though very slowly. In spite of the size of the industry, it is not well organised and suffers from the usual ills of a weak unit.

There is nothing exciting by way of original designs. Those in use are in the usual range from the Persian to the French, and seem rather stagnant compared with the size of the industry. It is almost wholly tied to export. Though a large section of this industry is on cottage basis, hardly anything has been done to offer the artisans common facilities. Even the minimum wage act provides a low wage and the earnings are very depressed.

Agra—U. P.:

After the fall of the Moghul dynasty, the carpet industry received a heavy setback and the weavers went through great privations. Around the middle of the 19th century, a group of Germans arrived in search of Indian carpets, some of whom set up factories in different cities like Amritsar, Srinagar, and even ventured south. Less than a century later when the British-owned East Indian Carpet Company was established, it was able to buy out the German concerns which had been placed under a handicap during World War I. As the world market for carpets opened again from 1920, the now well-known Indian firm of Kailash Carpet Company came to be established.

With fewer industries in the country and moderate demand on wool, the carpet industry in Agra flourished, especially feeding the American markets. From the 1930's a gloom settled, especially with the onset of the big depression in America, followed almost on its heels by World War. II.

In this dark interlude, the producers had gone in for inferior quality and cheaper goods to eke out a livelihood. The partition of India meant a loss of hundreds of good weavers who migrated from India. Shortage of raw materials and good weavers placed Agra in a weaker position as compared with the Bhadohi-Mirzapur area.

The two main production agencies in Agra today are the Kailash Carpet Co., and the East India Carpet Co., which is British-owned and a branch of the Amritsar one. The former works on a cottage basis, farming out its orders to individual weavers. The East India concern is a well organised factory. There are about 120 looms between the two, with another 50 operated locally by individuals. The number of weavers is in the neighbourhood of about 250. The average earning of a weaver is between Rs. 2 to Rs. 7 a day, according to the ability of each weaver and quality of his work. As Agra produces better quality work and there

is a shortage of good weavers, wages are not so depressed. There is an attempt being made to train fresh hands. The total current production is estimated at 20,000 sq. yards valued at about Rs. 2,00,000/-.

Agra produces three varieties, the Persian, Turkoman and Aubossan (French). In the Persian the Isfahan: long leaf, floral; Kashan, small leaf and floral, are common. In the Turkoman only the Mohru Bukhara. The French Aubossan account for more than half the carpets. These Aubossan carpets generally have wine-red, green or cream colours for the ground, with large floral designs in the centre and matching but smaller repetitions of the central motif in the corners. The pile is given a red or embossed effect by clipping the outlines of patterns. It is presumed that these Aubossan carpets being cheaper in price and easier to make will further increase their demand, encroaching more and more on the already small quantity of Persian and Turkoman types which being more complicated and needing more time for weaving naturally cost more. While the average Aubossan has an average of 16 to 62 knots per sq. inch, the Oriental has 120 to 400 knots. All are woven with the Persian Senneh knot. They have cotton warp and weft and are made from mill spun or worsted yarn. Fast chrome colours are used in the dyeing and are reliable. The carpets are also given chemical baths to protect them from vermin and other pests.

In the Persian designs seven to eleven shades are generally used. Wine red, deep blue and cream are usually popular for ground colours. For example a carpet with a red ground colour will have a dark blue border with two more blues, one medium and one light blues; two green shades, one dark and one light, two camel shades, one brown and one gold, one black and one dark brown. In the more sophisticated carpets four shades of each of the above colours are used. In the Aubossan, upto forty-five shades are employed.

Shahjehanpur—U. P.:

Shahjehanpur is another centre in Uttar Pradesh for pile carpets. It makes both woollen as well as cotton carpets. It is not as ancient as some other centres in India. It seems to go only a hundred years back when a convict released from jail set up carpet weaving to earn his livelihood since he had learnt the craft in his priosn days. Success came his way and soon there was quite a prospering industry.

The general economic backwardness of this region places this industry at an initial disadvantage in a competitive market. It is a totally depressed craft, as no attempt is made at any stage to improve or build it up.

Srinagar—Kashmir:

Kashmir is the most noted of all the Indian regions for its fine carpets. It claims to be amongst the earliest to have introduced this lovely weave into India by Prince Shahi Khan, the son of ruler Sikander of Kashmir. In the middle of the 15th century, he founded the carpet industry. After his death, it began to decline until Ahmed Beg Khan in early 17th century was deputed by Jehangir as Governor of Kashmir, and he became interested in carpet weaving. He had weavers specially trained and provided with better tools, and carpets began to flourish. After that for almost a century it went through several vicissitudes in which some foreigners figured including some French and German firms trying to manufacture carpets for export, but who eventually retreated. Up to now shawl manufacture had been paramount in Kashmir.

The export of Kashmir shawls declined as some European countries took to shawl manufacturing with copies of oriental patterns especially the Paisley designs. Several of the shawl weavers are said to have then moved over to carpets as the latter grew in popularity and the demand for them began to rise.

Carpet manufacture got fairly well established under M/s. Mitchell and Company and with it there began a steady flow of Kashmir carpets to the Western countries. For almost five decades from 1851 to early years of 1900, Kashmir carpets won great distinction and several prizes.

At one time, like elsewhere, only handspun yarn was used in carpets but it is no more so. The carpets are made of cotton warp and woollen weft with cotton backing. Kashmir has also reproduced carpets with woollen warp like the Persian.

Kashmir keeps to the Oriental designs. In addition to the various Persian, it also uses some of the Central Asian. In fact the copies are so faithful it would be hard to say they were not made in their own native region. The designs which closely follow the Persian carry the old names like Herati, Henna, Mian Khani, Isfahani, Shah Abbas etc. A stiff and heavy design that seems to have a strong attraction is known as Sardar Aziz Khan.

Kashmir is said to possess about a thousand carpet looms, most of them in factories of varying sizes engaging about 1500 weavers and about a hundred looms with individuals and families.

Besides the private factories, there are four production centres run by the Kashmir Arts and Crafts Emporium with 170 working looms, engaging 700 workers. Their annual production is in the neighbourhood of Rs. 5.5 lakhs annually.

There is one co-operative society of carpet weavers which has been working since 1948 with a membership of 121. Its production last year was Rs. 1,54,627/- and sales Rs. 2,40,028/- and distributed wages amounting to Rs. 46,679/-.

There is a growing awareness amongst the commercial houses for the need for Indian designs. A number of them have started to take from the shawl designs, patterns suitable for carpets. Some interesting experiments have been made by the School of Designs, Srinagar, where they have taken the actual shawl patterns, juxtaposed the designs to fall within the requirements of a carpet and simplified the colouring. In a few of these designs they have been successful and a new style is being created. M/s. Ghulam Mohiddin and Son have also been working on this and have produced an excellent cream coloured carpet based on the Amli shawl design. The production centres of the Kashmir Government Emporia have produced the shawl pattern in stripes which is quite effective as a carpet.

There is a rich repository in the shawl designs and if good use is made of these designs excellent carpets can be woven. The carpet weavers have a feel for the industry. Their recent reproduction of important old carpets such as the 17th century pictorial Indian carpet in the Boston Museum by the East India Carpet Company, the reproduction of the Ardebil carpet and of some of the well-known Indian carpets in collections abroad, proves a compelling need for creating typical Indian styles. Appropriate colour matching is also attempted. But if new designs are to be evolved from life around, master weavers with capacity for creation will have to be pressed into service.

Amristar—Punjab:

Amritsar as a carpet weaving centre began to take shape when around 1840. A batch of weavers along with a large influx of refugees migrated from Kashmir into Punjab, and came to settle here where they could procure with ease fine wool from surrounding mountains and villages. The weavers were shawl and carpet makers. The oldest carpet making firm started in 1860 in Amritsar, under the name of Devi Sahai Chamba Mal, now works under the name of Arora Carpet Company. There are two other smaller factories, Puri Carpet House and the Asian Carpet Manufacturers. The East India Carpet Company is the largest and is in effect owned, along with several other factories by the Oriental Carpet Manufacturers, though run under the name of the East India Carpet Company. This concern's factories are scattered over the northern Indian belt covering besides Amritsar, Agra, Jaipur, Gwalior and Mirzapur. The Oriental Carpet Manufacturers had, before coming to India, owned carpet factories in Persia, Afghanistan and Turkey. Hence the production was geared wholly to export. After the interruptions caused by World War II and the unsettling conditions after partition of India, the carpet industry in Punjab revived and the exports rallied once more and a fresh reorganisation took place. To meet the rapidly rising need, weavers were also brought in from Uttar Pradesh in addition to training up fresh local ones. A new feature initiated by the East India Company is the recruitment and training of women in carpet weaving. Before this they only helped in spinning and unwinding, separation of the warp and such like jobs.

Palampur—Punjab:

Palampur has no tradition in carpet weaving. The Punjab Government introduced training in carpet weaving as an industry to provide employment on a cottage basis. The centre opened for training with a batch of fifteen, each provided with a stipend of Rs. 30/-. During the Emergency several of the trainees seemed to have joined the army. An attempt was then made to recruit and train women. Co-operatives of the trainees were formed at the end of the course, but due to lack of leadership, poor organisation and indifferent production, the co-operatives had to be liquidated.

At the moment about 28 women are undergoing training and ten out of the hundred and odd who had passed out, are working in the production centre. There are 14 looms between them. Payment is on piece basis, 30 to 33 paise per thousand knots. For 8 hours' labour a weaver may earn Rs. 1.75 to Rs. 2/- a day, which is very low. Admission of trainees is now restricted to widows and married women.

Though the industry was located here to be able to utilise the local raw material, it has had to fall back on mill-spun yarn from Amritsar, as the local wool did not lend itself to better quality product.

Two noted centres for carpets in the early days were Lahore and Multan, both now in Pakistan. It was actually in Lahore that the first royal factory had been established and where some of the fine quality carpets had been made. This tradition is, however, shared by Amritsar today. Multan came more under the influence of carpets from Turkistan with more leanings to the geometrical patterns.

Gwalior—Madhya Pradesh:

The carpet industry in Gwalior was established around 1902 when the Maharaja Madharao Scindia, a patron of arts, invited the well-known Greek carpet expert, Mr. Stavrides to introduce carpet weaving in his state. Later a regular carpet factory G. P. Stavrides, Gwalior Ltd., was set up.

The carpets produced here were in the traditional sphere of Persian and Anatolian designs done both in the Senneh and Ghiordarn knots. Later some Chinese designs were also introduced. As the production was patronised by the Maharaja and his Court as well as the Sardars, a high quality was maintained.

In 1922 the East India Carpet Company, which was buying up many of the carpet concerns in India, acquired the factory and oriented the production towards export.

An Amritsar carpet factory left with hardly any weavers after partition of India, moved to Gwalior and got established as the Amritsar Carpet and Rug Manufacturing Company. These two factories keep 89 looms working, employing about 270 craftsmen. In addition there are 150 individual weavers working on their looms, who also take on job work for these two factories. The wages of the craftsmen range from Rs. 2.50 to Rs. 5/- per day. The East India factory does only production, the marketing being handled by its Amritsar Office. The annual turnover of Gwalior is about Rs. 12,00,000/-.

Only a small part of the current production about 20% is in Oriental designs, 60 % is in French Aubossan, the rest plain or in geometricals. The knots range from 20 to 200 per square inch. The Oriental designs are woven in wine red and dark blue matched with two or four shades of blue, brown, moss green, grey and red, while the Aubossan have for the ground camel, brown, green, pink and cream.

Jaipur—Rajasthan:

Jaipur was also a noted centre for carpets. The designs were however pronouncedly Persian in particular the cypress tree and animal designs, hunting scenes, mainly laid upon a ground of dark red, blue or ivory white. The borders had a swaying wine pattern with customary floral adjuncts. Carpets were also produced in Bikaner and Ajmere at the time. Today production in Jaipur is rather limited and includes the inevitable jail products.

Obra, Sasaram—Bihar:

The origin of carpet weaving in Bihar seems very ancient and can be traced back to the Buddhist and Mauryan

times. But what was woven then was the *durrie* or *suttranji* for which there is an old tradition in this country. The pile carpet, however, began to be manufactured only after the industry was established and encouraged by the Moguls, which then began to spread to all parts of the country.

It is claimed that during the reign of Sher Shah, a nawab by the name of Dandi, came to this region bringing with him some pile carpet weavers. These carpets were patronised by the rulers, Maharajas, Rajas, Nawabs, Jagirdars and all classes of aristocracy, and naturally the industry grew and flourished. At least a dozen places with something like 30,000 weavers attained fame for their fine carpets. It is said that some of the weavers who got introduced into the pile carpet industry came from the ancient weaver communities, and though the style and technique changed with the advent of the pile, the continuity in carpet weaving was maintained. It is difficult to vouch for it.

With the abolition of Zamindari and other feudal forms, the change in the country's economy with rising accent on industry and the radical social shift, the traditional patrons of the great craft declined and with them the pile carpets.

The present condition of this once famous craft is tragic. Out of the original dozen and odd centres only two still weave woollen carpets, but only against orders: Obra, 40 miles from Gaya and in the same district; Sasaram in the Shahabad district, a place famous for the tomb of Sher Shah, are active.

Today Obra has about 300 weavers, out of whom about a 100 weave in wool. But of these only about 50 to 60 can do any quality work in pile. With the fall in the demand for the fine carpets, the weavers changed over to the cotton durries, asans etc., or moved away to other regions. As this is a wool producing area, with the raw product readily available, quite a number changed over to weaving woollen blankets.

Sasaram has about 25 artisans who also weave in cotton or in wool if there are any orders.

At one time there was a wool emporium at Gaya where the weavers made wool purchases. That has since been closed, further depressing the lot of the weavers. The Khadi Commission has its store at Obra and Janihor and some wool is given out to the weavers. But the supplies of raw material and orders for carpets are too limited to keep the community fully engaged.

There are about 1500 carpet weavers. Their talent is wasted, their life reduced to a shadowy existence, with no succour or sustenance. They are reduced to making cheap and coarse durries and asans, or in the alternative to use wool to produce blankets.

Warangal—Andhra Pradesh:

As the Moghul armies moved down south and the Moghul regime took over territories and established its rule, some of the cultural forms came to be transplanted along with them. The Deccan where the Moghul rule got a foothold, imbibed these several new influences. One of them was the pile carpet with Warangal as one of its centres, which in course of time attained high reputation for its fine carpets. The community of weavers who got engaged in carpet making came to be known as Kalinbuff. Warangal was ideally suited, for it is in a wool producing area. Later, weaving in silk was also introduced. But cotton is one of the main raw products because of its easy local availability. The four varieties of wool in the local market in four natural colours—white, black, grey and fawn—went directly into the weave. Indigenous dyes alone were once used, now the chemical ones are also in use. These carpets found a place in the London Exhibition of 1851 as Deccan Carpets and made a great impact, winning the first prize for their workmanship. The designs were confined to Persian copies. One of the 16th Century Warangal carpets is today in the South Kensington Museum, London, finely woven with 400 knots to the square inch. The designs in this are said to be so complicated that a change of needle became necessary for each knot. Some were even finer 12,000 knots to a square inch. The colouring was also harmonious, the brilliancy of individual hues being kept in control by the close weave and careful distribution of the colour areas.

In the 1920's the Nizam of Hyderabad in whose domain Warangal fell at the time, set up a carpet factory to organise its production on a rational and scientific basis. A link was forged with the East India Carpet Company who lifted these goods for export. In course of time several individual weavers also began producing carpets. Apart from the old Persian, some local designs were also developed, especially small geometrical motifs. Even the Persian ones gradually underwent modifications and took on more original traits with local flavour. For instance the more delicate curvilinear Persian motifs got replaced by bold, more positive patterns. These locally evolved designs have their own names like Hashim Khani, Ramchandran Khani etc.

This once flourishing industry seems to have fallen on evil days. There is much decline in production and sale. In late 1952 a cooperative society had been promoted with 190 members. Now it has only 20 working members. Its current share capital is Rs. 4,020/- and production Rs. 52,410/-.

Elluru—Andhra Pradesh:

The weaving of pile carpet in Elluru can be traced back to about the year 1679 when this craft spread down south under the Moghul regime. It is claimed that from amongst the original Persian weavers who were brought over to introduce pile carpets in India or some of their descendants, some families came south and settled in this region at Masulipatam and continued to pursue their traditional vocation. Masulipatam was an important trade and industrial centre and seaport at the time. From here Indian crafts like carpets were shipped by the East India Company to English and European ports. This was considered one time as one of the finest carpet centres, producing a variety of the most beautiful designs, each surrounded by the delicate outline of a tint in perfect contrasting harmony with the colours of the parts surrounded by it. In fact these designs used to be described to be blossoming as delicately as the first flowers of spring. Later some families migrated to Elluru. It is wonderful to find this little town today still faithfully producing

the Persian design carpets, for a few of the families claim direct descent from the original migrants. The weavers here, like in Warangal, are known as the Kalinbuff community.

Madras and Vellore also were once famous for pile carpets. Later Hyder Ali founded a carpet factory in Bangalore, bringing good weavers from other centres and producing excellent carpets. Fine silk ones were woven in Salem. Most of them have disappeared.

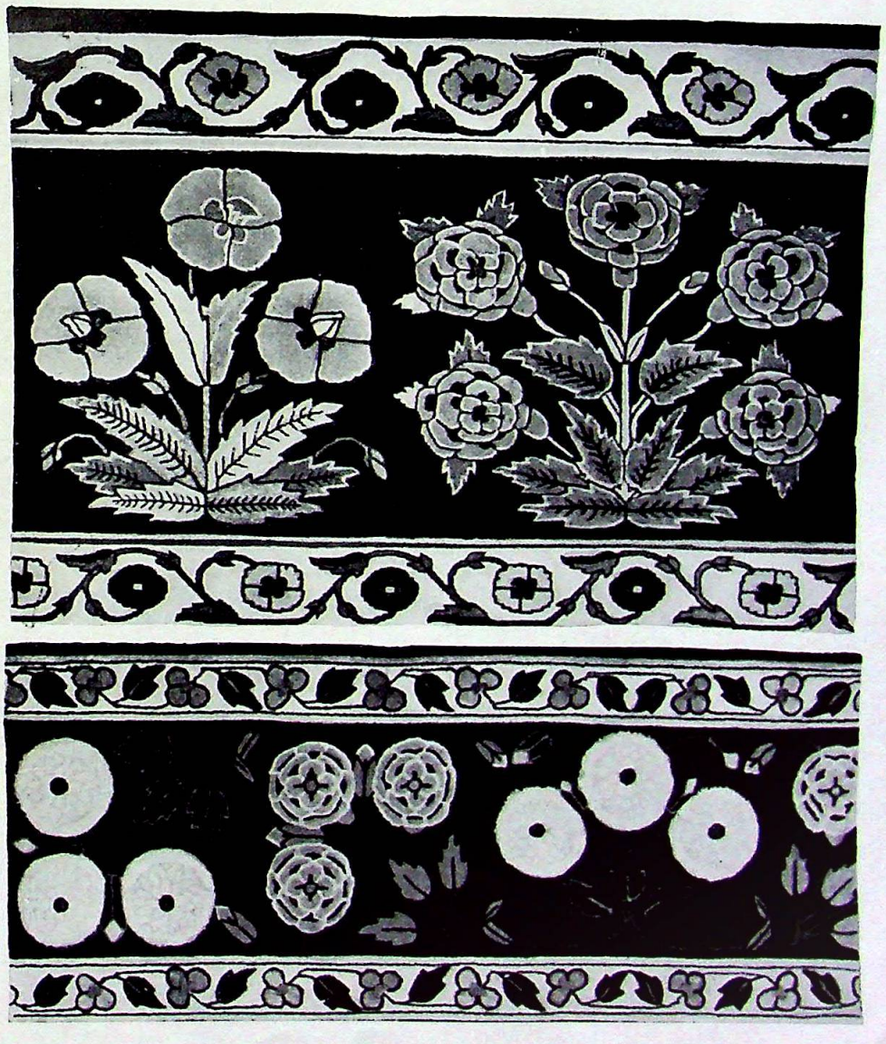
Malabar too was once known for pile carpets with very typical Indian designs, free from any outside influences. As they used only the local wool which was coarse, they were made attractive nevertheless by evolving large designs with bold colours, which lent character and dignity to the coarse yarn which otherwise might have looked harsh and ugly. The gay colours stood in fine harmony with the prominent designs, working out a good balance. Extolling their beauty Sir George Birdwood says: "No other manufacture of carpets known could hold a pattern together with such a scheme of colouring and scale of design. The simplicity and felicity shown in putting the right amount of colour and exact force of pattern suited to the position given them, are wonderful and quite unapproachable in any European carpets of any time or any country. They satisfy the feeling for breadth and space in furnishing, as if made for the palace of kings." The silk carpets made there also had a special striking quality. The effects of the play of light and shade when walking across them like that of summer clouds passing over a field.

Sunhemp carpets, Gopalsamudram, Tirunelveli District, Madras State

A new line in pile carpet was introduced with the pressing into service of sunhemp in Madras State. A training centre for this purpose was recently introduced at Gopalsamudram in Tiruneveli district with 12 trainees. The course is of two years' duration. The training includes carpet as well as drugget production. The trainees, as they completed their course, were formed into a cooperative. The cooperative has today a membership of 73. The production of the pile carpet for 1963-64 was to the value of Rs. 2,435/-. Actually the factory went into proper production only from 1962 and it will need time to get established into proper working.

The carpets have cotton twine warp and 2-ply yarn is used. For weft twofold sunhemp twine is used. This yarn is far more even and smooth than carpet pile yarn.

The technique of weaving and knotting is the same as in the hand-woven woollen carpets. The looms are vertical but improvised with some variation in the upper warp beam, that is the upper beam is lowered rather than warp unwound of it. The pile density is 50 knots per foot which works out to about the same density as the Bhadohi—Mirzapur carpets of 3-3/4 × 19 quality. No separate finishing operation like clipping or embossing is carried out. The levelling of the pile is achieved during weaving.



INDIAN CARPETS IN U.S.A. MUSEUM

by
CHARLES GRANT ELLIS
Research Associate of the Textile Museum, Washington, D.C.

In numbers and in interest the carpets from India owned by American museums compare very favourably with the combined holdings of those in Europe. However, due to problems of space, to building alterations and to exhibition policies, very few of them are currently displayed. So an article about these rugs in travelogue form would merely be misleading. It seems preferable to take them up by type.

The most exciting Mogul rugs are of course the scenic or pictorial pieces, in the tradition of 16th and 17th century Persian carpets that have been attributed to Kashan or Kirman. The Indian examples, like the Mogul miniature paintings which have greatly influenced them, are more realistic in action and effect, yet introduce stranger fantasies and odd contrasts in behavior.

1. *SCENIC CARPET FRAGMENT*
Courtesy: The Textile Museum, Washington, D.C.

Thus, the carpet in the National Gallery of Art in Washington (Fig. 2) involves rhinoceros, dragon, elephant, crocodile, magic lion, tiger, kylin and cheetah, in a marvelous mad whirl of activity, while at the center of the commotion a tamed elephant with rider follows his own course and takes no heed. In the smaller "Current Events Rug" of the Museum of Fine Arts at Boston (Fig. 3), the hunting party with cheetah in a bullock cart has no eyes for the unearthly assault of the Chinese feng-huang upon the elephant-garuda with his multiple elephant prey. Neither do the inhabitants of the summer-house at the upper left give a thought to the bull brought down at the doorstep. The fighting camels in the National Gallery carpet are echoed by a pair of elephants in a well-known fragment (Fig. 1) in the Textile Museum at Washington, but the large and quite worn scenic carpet in the same museum is relatively peaceful in content, with a stream sweeping backward and forward through a jungle in which we find scattered birds, monkeys and other random beasts playing secondary roles.

It is much more normal for large carpets to be designed, as so many other textiles, as a series of repeats of some limited design. Among animal carpets it will seem natural to have a drop repeat, meant to be looked upon from one end only. A truly remarkable example is the great carpet in the Metropolitan Museum of Art in New York City, formerly J. Pierpont Morgan's and before that, Lord Sackville's, in which palms and flowering trees with birds serve as a backdrop for hunting animals. The Textile Museum has a smaller rug of the more usual variety, seen at its most complex phase in the Ilchester and Fremlin carpets of England, in which the animals chase across the field; first from one side and then from the other, against a net of vines and palmettes. Other rug types could also be planned to be seen one way, as the delicate and pieced-together tree rug from the Ardebil Shrine, now in the Frick Collection in New York City, whose extremely fine pile, perhaps of Cashmere, has been described as silk. Small fragments from this are in the Textile Museum and the Metropolitan.

The amazing variety of the non-directional repeat designs for floral carpets, in which little medallions and compartments may assume strange forms and the lancet leaves of the Persians gradually change over into pendulous racemes, can be best seen in old catalogues of the Benguiat brothers, who brought so many of them to America, and in the photographic files of such long-established firms as French & Co. Most of these carpets have yet to find their way into the museums. We must cite to represent this class another great Morgan rug in the Metropolitan Museum, again from Knole Park, with a Herat compartment border. A carpet with a border in sweeping bands and a novel arrangement of small oval medallions in field and corners (Fig. 4), is in the Detroit Institute of Arts. A third carpet, presently on view in the Metropolitan Museum, from the Altman Collection, combines little cartouches with handsome palmettes and with rosettes clasped by pairs of lancet leaves in the South Persian manner. The border of this rug shows a series of individual, isolated plant forms.

Isolated flowering plants of this kind in rows, become a standard field design in a series of carpets from Jaipur, reportedly made for the palace at Amber. Some of these pieces have found their way to America, among them a carpet in the City Art Museum of St. Louis. A fragmentary piece is owned by the Frick Collection in New York City, with flowering plants of unusual scale. Sometimes these rugs were shaped peculiarly, to fit definite floor spaces. Perhaps one of these, now in the Textile Museum in Washington was intended to partially surround a fountain.

A border of individual plants occurs also in a Textile Museum rug (Fig. 5), whose field, a trellis patterning, divides up into quatrefoils and stars, each of which contains yet another blossoming plant. Trellis designs were great favourites among Mogul carpet weavers. An incomplete carpet, often illustrated, in the Altman Collection of the Metropolitan Museum, has an ogee trellis with large blossoms at its intersections, based upon some of the vase carpet designs of Kirman, in Southern Persia. Several United States museums, such as the Textile Museum, the Detroit Institute of Arts and the City Art Museum of St. Louis, as well as the Metropolitan Museum of Art, have fragments from very lovely and dainty trellis designs, somewhat European in feeling, such as culminated in the enormous, seventy-foot Indian carpet that once adorned the Palace of Chihil Sutun in Isfahan. A piece from this too survives in the Philadelphia Museum of Art. The Mogul silk rugs are also usually planned with some sort of trellis arrangement. There were five in one New York auction in 1952, but the only museums that seem to possess them now are the Corcoran

Gallery of Art and the Textile Museum, both of Washington. A somewhat similar rug in the Textile Museum, probably of Cashmere pile upon silken warps in bands of varied colors, once very attractive, has over 1100 knots to the square inch. For excessive fineness this is in turn surpassed by a fragment of a prayer rug in the Altman Collection of the Metropolitan Museum, which is said to have over 2500—a real tour de force of knotting.

The rare Mogul prayer rugs are not well represented in museums, although the oldest, a fragmentary multiple or row prayer rug formerly in the Sarre Collection, is now in West Berlin. A much later example, probably as late as the 18th century in date, with seven niches in a row, is in the the Textile Museum. Similar examples with less niches have been in the New York and London art markets in past years, and a poor little rug of this sort with a single niche may be seen in the Philadelphia Museum of Art, which displays most of its rug treasurers. Another class of Mogul prayer rug offers a single large, blossoming plant, a sunflower or a thistle, below a graceful compound niche head. A very handsome example of this type, in the collection of Joseph V. McMullan of New York, long displayed at the Metropolitan Museum, must be mentioned here as several years ago its owner brought it back for a visit to Lahore. This was thought to be the first time that such a rug had been seen in two centuries or more in the area where it had been made. The same owner has both an Indian prayer rug of the millefleurs type, with the spray of blossoms springing from a vase, between half cypress trees, and one of the copies made some years later in Shiraz. All three are in the Textile Museum as this is written, to form part of a touring exhibit of this collection, to be seen in many United States museums over the next few years.

In the "Survey of Persian Art" Arthur Upham Pope has pointed out the Indian origin of several varieties of carpets usually considered Persian. Of these, the so-called "Portuguese carpets" with concentric, serrated medallions and with sailing vessels and swimmers in the four corners of their fields, are Mogul in their color scheme. The one illustrated in the "Survey" from French & Co. is now in the Metropolitan Museum of Art. The former Lamm example, from Sweden is in the H. F. duPont Museum at Winterthur, in Delaware.

A problem not yet resolved concerns the rugs and carpets known to an earlier generation as "Indo-Ispahans". Many, if not most of these, came to light in Portuguese churches and noble houses. As the years have passed, the tendency has been to forget the "Indo" and to accent the "Ispahan". Their coloring differs decidedly, however, from the East Persian hues of Herat, to which modern scholarship has been prone to ascribe them. Neither is it quite the coloration of the rugs from North India. If the Mogul carpets were the creation of an alien, Turkestan culture, based upon Persian models, in Goa the alien merchants from Europe of the 17th century in their turn set up looms, as Pope cites in the "Survey", to weave great rugs for Portugal. Again Persian schemes were adopted, but with new details; more elaborate borders; eventually, new designs. We can see such carpets in the Museu de Arte Antiga in Lisbon and in the museum at Coimbra. In America we will find them in comparable number and importance in the W. A. Clark Collection of the Corcoran Gallery of Art in Washington. Our first illustration from this series (Fig. 6) shows an elaborate creation, 44 feet long, with lancet leaves handled with an abandon not usual in Persia, and our second (Fig. 7), 26 feet long, is a magnified version of a Mogul arabesque type once to be seen at French & Co. in a rug that is now in the museum at Hamburg in Germany. It is too early to say with conviction that these rugs from Portugal, which can also be found scattered through other American museums, were all made in Goa. It is at least, an attractive theory, although many are small, quite a few of them are very large indeed, and it would seem logical to have procured wool and weavers from a distance but to have produced these carpets at the point from which they would have been shipped overseas.

This survey has scarcely been a complete one. Nothing has been said, for instance, of the charming millefleurs rug in the Cleveland Museum of Art, or the little fragment at Boston of the 16th century "waq-waq" rug whose larger portions are in Paris. Attention should nonetheless be called to fragments in Detroit and Boston; in the Textile Museum and in the California Palace of the Legion of Honor at San Francisco (where there are three of them), of the very curious great carpet or carpets with monstrous heads and with a succession of crudely drawn animals, each lunching upon his neighbor. These were accorded great age by a generation that valued rough drawing and "primitive" qualities in its antique carpets. Later scholarship may well terminate such aspirations in favour of the 18th century, unless some of the border should turn up somewhere to reinforce an earlier dating. In any case, of all the rugs from the peninsula that we have examined, these fragments may well be the most peculiarly Indian of all.

2. *SCENIC ANIMAL CARPET*
National Gallery of Art, Washington, D. C. Widener Collection

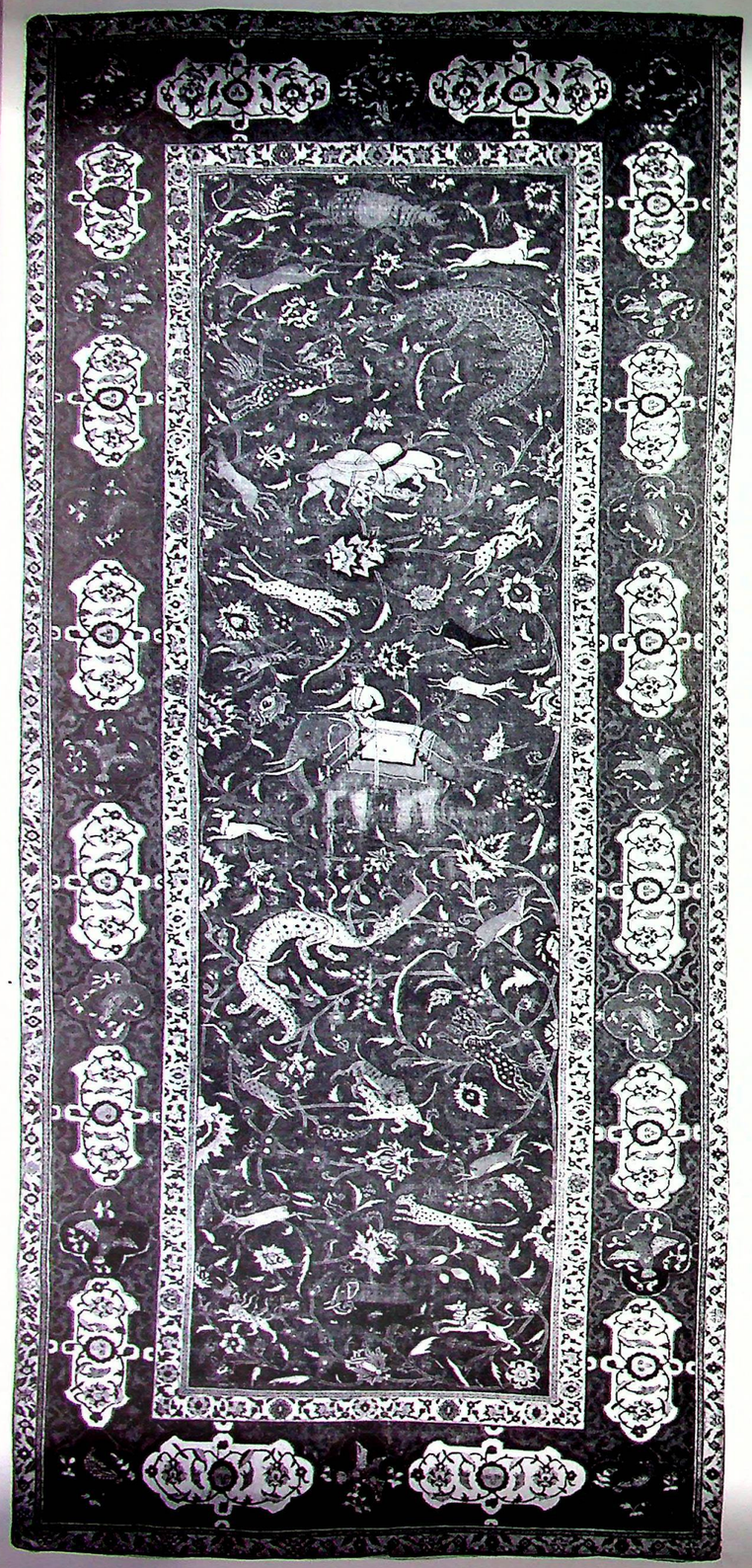
3. *PICTORIAL CARPET*
Courtesy: Museum of Fine Arts, Boston

4. *FLORAL CARPET*
Courtesy: Detroit Institute of Arts

5. *RUG WITH QUATREFOILS AND STARS*
Courtesy: The Textile Museum of the district of Columbia

6. *FLORAL GREAT CARPET FROM DUKE DON GAETANO DE BRAGANZA COLLECTION (DETAIL)*
In the W. A. Clark Collection of the Corcoran Gallery of Art, Washington, D. C.

7. *ARABESQUE CARPET FROM THE CONVENT OF ST. ANTHONY IN LISBON (DETAIL)*
In the W. A. Clark Collection of the Corcoran Gallery of Art, Washington, D. C.



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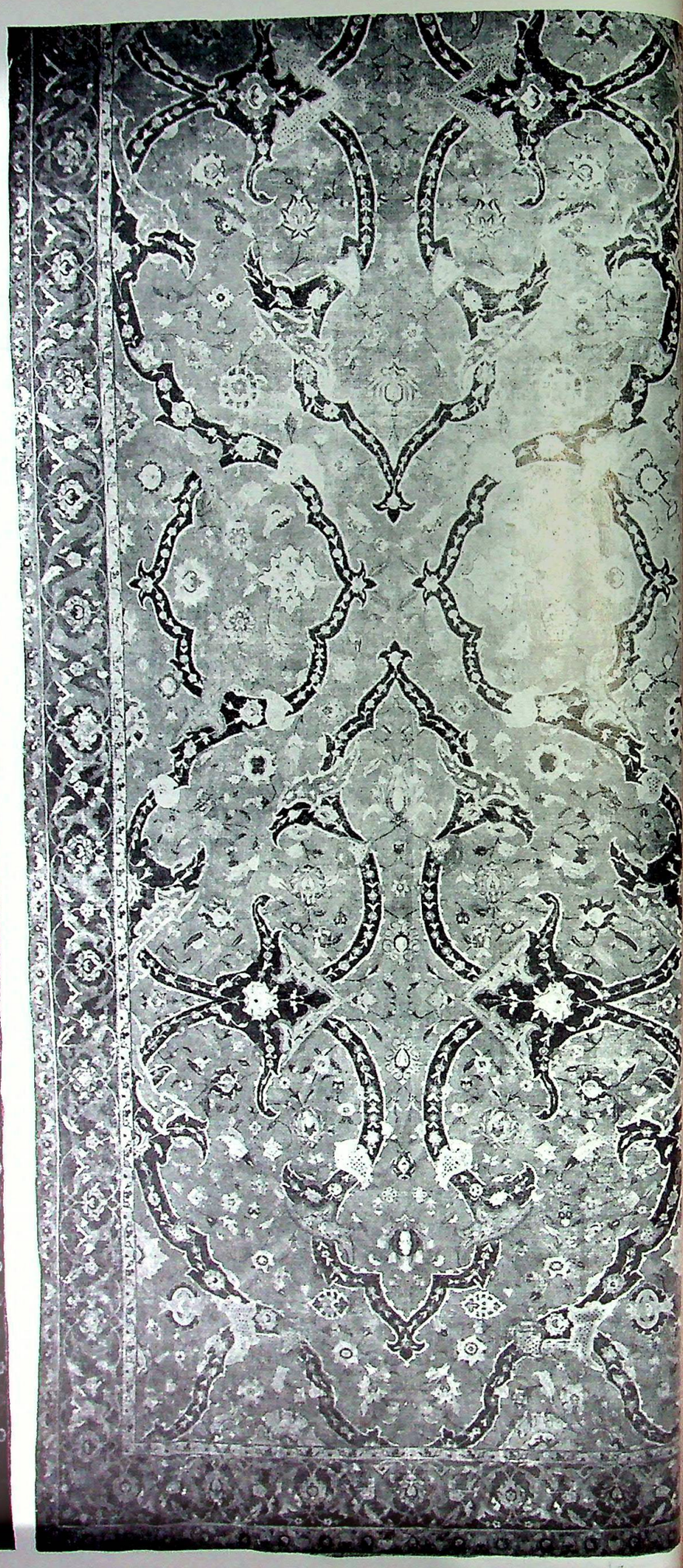


GIRDLERS CARPETS

By
JOHN IRWIN

Keeper, Indian Section. Victoria & Albert Museum. Reproduced with the kind permission of Girdlers Co. London

The Company's magnificent Indian Carpet, known to the world at large as The Girdlers Carpet, is one of the most sumptuous textiles surviving from a period when the East was especially famed for the luxury and splendour of its decorative arts. Apart from its intrinsic interest as a work of art, it is unique among carpets by reason of its long historical association with the City of London and the fact of especial value to art historians that we have a clear picture of the circumstances in which it was commissioned and made.

The story of its presentation:

The gift of the carpet to the Company is recorded in a Court Minute dated 12th August, 1934: "Also at this Court Mr. Robert Bell did present a very faire long Turkey[1] Carpitt with the Company's Arms thereon which he freely gave to the use of this Company as a remembrance of his Love. "[2]

The donor, Robert Bell (1564-1634), served as Master of the Company in 1611, and again for four months in the year the carpet was given, when he occupied temporarily the vacancy resulting from the death in office of the then Master. He was not, as far as is known, a girdler, but a merchant adventurer who gained admission either by patrimony or on account of his wealth and influence in City affairs. His chief distinction was that he served as a prominent member of the East India Company from the time of its foundation in 1600 until shortly before his death at the age of seventy-three.

It was one of the privileges of the East India Company directors at this period that they had easy access to the "rarities" and "curiosities" brought home with the pepper and spices in the Company's ships. Hangings and carpets were especially coveted, more so than even when it was discovered that, by making private arrangements with the Company's agents stationed in the East, such goods could be ordered with the coat-of-arms of the purchaser as part of the design. (Sir Thomas Roe, James I's ambassador at the Mughal court from 1615 to 1619 was one of the first to acquire for himself "a great carpet with my arms thereon.")[3]

Surviving records of the East India Company show that Robert Bell ordered his carpet through Thomas Rastell, who, in the spring of 1630, sailed from London to take up the appointment of president of the Company's council at Surat, chief depot in Western India. Instructions about the carpet, together with drawings of the coat-of-arms and other devices to be reproduced, were probably given to Rastell personally before departure, and we must assume from what follows that Bell also made Rastell a payment in advance.

About a year after reaching India, Rastell fell ill and died. By this time, however, the weaving of the carpet was already in progress at Lahore (one of the two main centres of carpet-weaving in Mughal India, the other being Agra). Rastell had passed on the order to subordinates who, no doubt, acted with reluctance, for there had earlier been sharp complaints about the trouble involved in such commissions. For instance, on 15th December, 1619, the Agra factors had written: "We perceave, by experience of a few (carpets) bespoken here, that the tardiness, slowness and poverty of the workmen to be such that it is endless labour to bespeake them, and those bespoken to cost dearer than others ready made."[4] And again later: "to my knowledge there hath been a carpet in Agra house this twelvemonth amakinge, and yet it is little more than half done; and they neither make them so well nor so good colours as they make them without bespeaking."[5]

About two and a half year elapsed between Rastell's arrival in India and the despatch of notice to London that the carpet was ready for shipment; but, in this particular case nobody could have complained about standards of workmanship or materials. When Rastell's successor, Joseph Hopkinson, wrote on 25th January, 1633, that he was shipping from Surat "four carpets for Sir John Wolstenholme[6] and one for Mr. Bell,"[7] he might fairly have added that the latter was equal in workmanship to the best produced in India at that time.

The dispute about payment:

The next reference traceable among surviving records is the following interesting entry in the Minutes of a meeting of the directors held in London, on 2nd April, 1634 (reproduced in the original on the facing page):

"Mr. Bell having given order to Mr. Rastall in his lifetime for the making of a Lahoare carpett, containing seven yards longe and three and a half yards broad. (This is an error, the true dimensions being 8 yds. X 2½ yds. J.I.), with his owne and (the) Girdlers armes thereon, for which Mr. Bell

(as hee alledged) had given Mr. Rastall satisfaction: and the said carpett beeing since the death of Mr. Rastall sent home, Mr. Bell was nowe sutour to the Court to have the same delivered unto him, hee intending it as a guift upon the Company of Girdlers, whereof hee is free: the Court, taking his request into consideraction, and although they are of opinion that the said carpett was bought with their monies, or at least charged upon their accompts, in which respect it was thought fitt that they should bee satisfyed for the same before they part with it out of their custody, yet in favour to Mr. Bell they were pleased to order the delivery thereof unto him, upon his promise made to the Court that, if it shall hereafter appeare that the Company have paid for said carpett out of their estate, to repay the same againe unto them, with all such damages as they shall sustayne thereby."[8]

Subsequent attempts to get details of the transaction from India were apparently unsuccessful, for on 29th December of the same year the Surat agents reported that the Bell carpet, together with the four for Sir John Wolstenholme, had been provided under arrangements made personally by Rastell before his death and that no particulars could be found. As the subject is not mentioned again, it must be assumed that the directors decided that the matter was not worth pursuing further and that Bell's assurance that he had settled with Rastell in advance should be accepted.

Exactly how much Bell paid for the carpet will never be known, but some idea of its contemporary value may be calculated from the prices fetched by carpets at East India Company auctions at this period. The average price fetched by a carpet of comparable dimensions (7-5/8 yds. X 2-1/2 yds.) was about £ 29[9]. Since the Company normally expected a profit of at least 100 per cent. on textile sales, the cost price is likely to have been in the region of £ 15. Allowing for the superior quality of the Girdlers' carpet and the fact that it was 'bespoken' we are, therefore, probably safe in assuming that the cost of commissioning it and bringing it to England was somewhere in the region of £ 20, a sum which seems small to-day, but which was a substantial expenditure on furnishing for those times.

Description and analysis:

The dimensions of the carpet (approximately eight yards by two and a half) were probably dictated by the size of the original Court Room table (destroyed in the Great Fire) for which it was intended. In fact, the surface area of the original table probably corresponded to the centre-field with red ground, an unusual feature of this carpet being the exceptionally broad border designed to be seen hanging down the sides of the table. (Although there are other reasons to-day for displaying the carpet flattened out in a vertical frame, this is, unfortunately, not a way which does full justice to the design. Conservation now being the main concern, there is no practical alternative.)

Set in the middle of the centre-field is the Company's coat-of-arms, reproduced, as it happens, facing the wrong way[10]. This consists of a shield with the gridiron three times repeated (the latter being emblem of the martyrdom of the Company's patron saint, St. Lawrence). Above the shield is a casque surmounted by the demi-figure of St. Lawrence holding a Book of the Gospels in one hand and a gridiron in the other. Below the shield is the Company's motto, GIVE THANKS TO GOD.

On either side of the central coat-of-arms is a shaped white panel bearing a monogram formed of Robert Bell's initials and, repeated four times, a device which one authority has supposed to be his trade mark[11]. At each extremity of the centre-field are the arms of Bell himself: azure, an eagle displayed argent, in chief three fleurs-de-lys or.

There is no doubt that the carpet was designed specially to order. This is shown, for instance, by the fact that the floral scroll-work in the centre-field is arranged to leave blank spaces for the coats-of-arms and other devices. If these devices had simply been imposed on an already prepared design, the floral scrollwork would have appeared to run continuously across the centre-field as though passing behind the devices (as has been the case with most other carpets not specially designed).

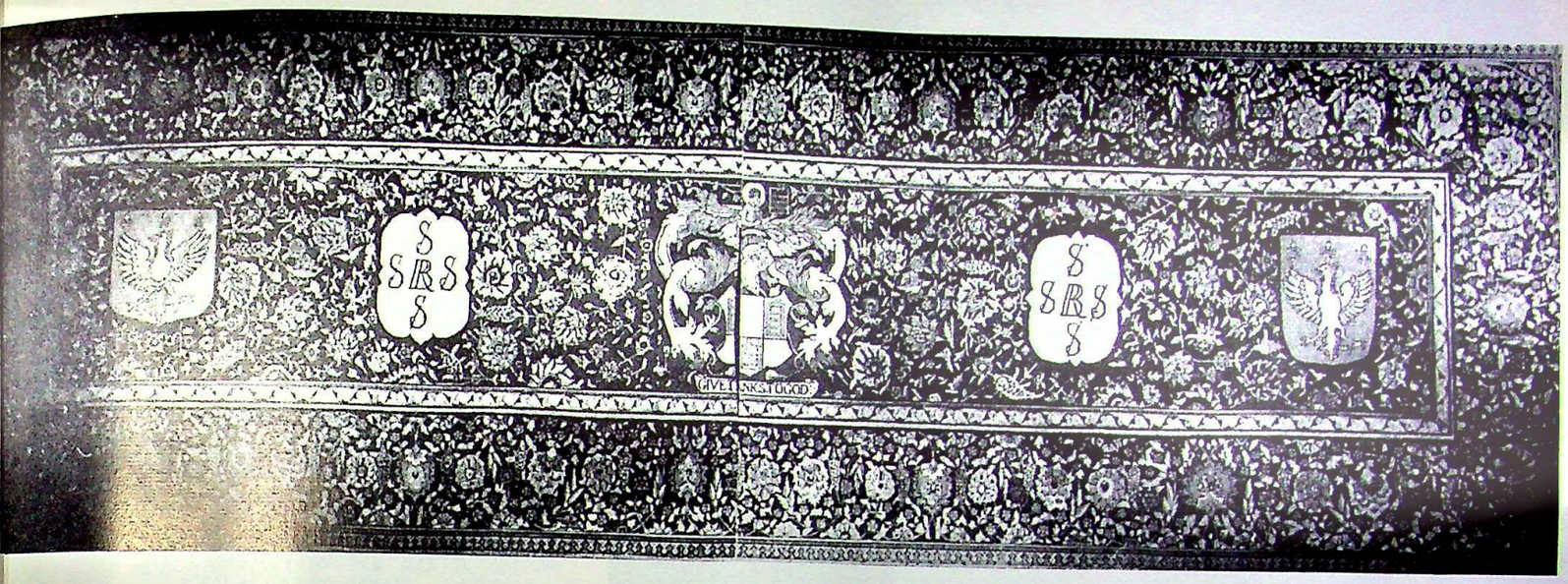
The flowers used in the design are borrowed from long-established Persian carpet tradition, the three main constituents being the lotus-palmette, the leafflower in the centre-field; the leaf-palmette (sometimes difficult to distinguish from the lotus type), and the lanceolate-leaf (here made to resemble Wistaria flower) alternate in the border. Each of these motifs owes its highly stylized form to long use in Persian carpet design, and it is doubtful if a Mughal craftsman of the 17th century, with his developed taste for naturalism in flower-drawing, would have recognised the true natural origins of these fanciful forms. Certainly, the lotus-palmette has no resemblance to the lotus as frequently depicted in traditional Indian art, and his inability to recognise a leaf in the Persian lanceolate-leaf motif is shown by the fact that he transforms it into a sort of Wistaria flower, interposing it between the palmettes of the border. This kind of misunderstanding occurs often in the copying of the motifs of one art convention by the craftsmen of another, and Mughal art provides many examples.

The carpet is woven with cotton warps and wefts and a woollen pile, the latter being inserted by the technique of Sehna-knotting, with three shots of the weft per line of pile. There are 224 hand-tied knots per square-inch of surface (16 knots per warp-inch and 14 knots per weft-inch), representing a compactness of texture which compares favourably with the best Indian carpets, but which falls short of the finest Persian carpets of a slightly earlier period[12].

There are at least seven dyes used in addition to black and white, these being two shades of red, two blues, one yellow, two greens and two browns. All the colour dyes are, of course, of vegetable origin, the black being derived from iron-fillings.

At the time the carpet was commissioned, pile-weaving had not been practised in India for more than about forty years, the technique having been introduced by Persian immigrants under the personal patronage of the Mughal Emperor Akbar (1556-1605). Once mastered by Indians, however, the craft was quickly adapted to Indian canons and soon became a distinctive expression of Mughal art. About 1600, Akbar's chronicler, Abul Fazl, recorded: "His Majesty has caused carpets to be made of wonderful varieties and charming textures; he has appointed experienced workmen, who have produced many masterpieces. The carpets of Iran and Turan (Persia and Turkestan) are no more thought of. All kinds of carpet weavers have settled here, and drive a flourishing trade. These are found in every town, but especially in Agra, Fathpur and Lahore"[13].

The carpet looms of Lahore and Agra, although existing primarily to meet Court needs and enjoying the status of a royal industry, also produced carpets commercially. There are no records giving an exact account of the organization of the industry and its relation to the royal Treasury, but if the palace industries of Persia are to be taken as a guide



The Girdlers' Carpet (Photo–Ram Dhamija)

(which is logical), we may assume that the weavers enjoyed a large measure of independence in the management of their affairs. They would have been obliged to work for the Emperor only on command and for the execution of specific orders, being free otherwise to negotiate private commissions and to produce work for the commodity market. At the same time, the fact that they had the status of a royal industry implied certain decisive advantages, such as access to the finest materials.

The original Persian settlers probably inter-married with Indians and, by the time the Bell carpet was woven, it is doubtful if there were any Lahore carpet-weavers of pure Persian origin. This state of affairs is reflected in the acutal design of the carpet which although using the grammar and motifs of Persian ornament, employs a rhythm and a bold contrast of forms and colours which are characteristically Indian. For this reason it would be a pity to repeat the mistake of an earlier critic[14] and judge the carpet as though it were another Persian product which happened to be woven in India. Even the quality of sumptuousness which distinguishes the design as a whole partakes more of the robustness of Mughal art than the attenuated idiom of Safavid Persia. The Girdlers' Carpet must be understood as a unique work of art in its own right and as a masterpiece of Mughal India.

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1. Turkey was the generic term commonly applied to all pile carpets, whether of Turkish, Persian or Indian origin. This arose from the fact that those of Turkish origin were the first to reach Europe.

2. Quoted by W. Dumville Smythe, A historical account of the Worshipful Company of Girdlers, London (London, 1905), p. 224. The original Minute Book is now missing.

3. Embassy of Sir Thomas Roe, London (Hakluyt Society), 1899, fn., p. 389.

4. The English factories in India, 1618-1621 ed. by W. Foster, London, 1906, p. 161.

5. Ibid., p. 168.

6. Sir John Wolstenholme was a director of the East India Company and one of the richest merchants in London (see Dictionary of National Biography).

7. The English Factories in India, 1630-1633, ed., by W. Foster, London, 1909, p. 277.

8. India Office Archives, Court Minutes.

9. This calculation is based on carpet sales recorded in Court Book IV (1617-1619) at the India Office Archives. Very few carpets were auctioned after 1620, commercial interest having declined.

10. There is no logical explanation of this, especially as the Bell coat-of-arms reads correctly. One can only assume that at some stage the original drawing of the Company's arms was traced and stencilled and that the tracing paper was accidentally reversed before pouncing. In which case, the lettering was presumably not traced but added afterwards.

11. A. F. Kendrick, Pile carpet belonging to the Worshipful Company of Girdlers. Art Workers' Quarterly, Vol. III, 1904, pp. 97-99. The same authority suggested that the shaped white panels were "ornamental renderings by the Eastern weaver of a bale of goods." It is doubtful if this interpretation would find general agreement to-day as it is not consistent with general evidence of the period. The usual container for initials on Indian textiles was a shield; but, in this case, the designer obviously needed a visually satisfying alternative to the shield already appearing three times. There are parallel examples where the Indian designer had varied the conventional escutcheon beyond recognition as a shield.

12. The famous Ardabil carpet dated 1540 (now at the Victoria and Albert Museum), which was one of the finest even woven, has 360 knots to the square inch. At the other end of the scale are the Mughal flower-carpets with sometimes as few as 50 knots to the square-inch.

13. Ain-i-Akbari, translated by H. Blochmann, Vol. I, London, 1873, P. 55.

14. A. F. Kendrick, op. cit., p. 99.

An interesting account in this respect has been given by Henry T. Harris, "The really interesting narrative of that 'God-fearing pirate", Juan Fernandez Pinto, shows how piously and boldly the "Portugalls" of his day (XVI Century) cruised round both coasts of India and the Far East generally, picking up such trifles as inadequately armed ship with their cargoes of cloth, ivory and spices belonging to the Infidel, and, no doubt, also attended to their own needs, in the sacking of ill-guarded towns, and then offered up long prayers of Thanksgiving to the Almighty, if they got clean away with whole skins and a valuable haul. Doubtless some of the old South Indian carpets may still be found in the cathedrals, churches and old homes of the rich and noble in Southern Europe, which were got through the exertions of these estimable gentlemen." Henry T. Harris, Monograph on the Carpet Weaving Industry of Southern India, 1908, p. 2.

@ In the reign of King Edward V, before the throne and the communion tables were: "carpets full gay, That Wrought were in the Orient" Henry T. Harris, Monograph on the Carpet Industry of Southern India, 1908, p. 2.

* John Irwin, Indian Textile Trade in the 17th Century: (1) "Western India—Journal of Indian Textile History", 1955, p. 18.

@ Ibid. pp. 18-19.

* E. B. Havell writing in 1885-1888 says "the native demand is confined to small mats or rugs, large carpets are made for European firms."

@ Monograph on Carpet-making in the Punjab, 1905-1906.

FREMLIN CARPETS

by
JOHN IRWIN

To possess a fine oriental carpet in England in the early seventeenth century was a mark of wealth and luxury. To possess one bearing the family coat-of-arms was an even more enviable mark of prestige, enjoyed only by those with influence in the affairs of the East India Company.

Perhaps the first to set this example was Sir Thomas Roe, James I's ambassador to the Mughal court from 1615 to 1619, who is known to have brought home "a great carpet with my arms thereon", but unfortunately there is no record of its survival beyond the fact that it was left in his Will to a cousin, Sir Henry Roe.

Detail of the coat-of-arms of Fremlin Carpet. Collection: Victoria and Albert Museum, London

Another carpet was commissioned in 1631 by a director of the East India Company named Robert Bell, bearing his own arms together with those of the Girdlers Company, of which he had twice served as Master. This carpet survives as a treasured possession of the Girdlers Company and can be seen to-day in their newly-built hall near St. Paul's cathedral. A third carpet bearing the coat-of-arms of the Fremlin family, is now in the Indian Section of the Victoria and Albert Museum.

"The Fremlin Carpet", as it is called, owed its existence to William Fremlin, who served in the East India Company in India between 1626 and 1644. Born about 1608, he joined the Company's service at the age of eighteen. The records show that he was at Ahmedabad in 1628, at Agra in 1630 and 1633, and at Surat from 1634 onwards. In 1637 he was elected successor to William Methwold as President of the Council at Surat, and in the same year went on a mission to Persia, returning the following year. He left India in 1644 and died in March, 1646, in his native parish of Shoreditch (now part of East London), aged thirty-eight, having made substantial bequests to charity. St. Leonard's church, in which he was buried, was rebuilt in 1736, and his tombstone, which was described as a spacious marble monument situated on the South side of the altar, can no longer be traced. However, its long inscription is published by Edward Hatton, *New View of London*, 1708, I, 312, and its arms were described as: Gules, a Chevron between Three Helmets, Argent for the Crest, an Elephant.

There is no mention of the carpet in contemporary documents, but its acquisition is entirely in keeping with what we know of his character from the East India Company records. Not only was he zealous in pursuit of private trade, even to the extent of achieving notoriety among his colleagues, but on at least one occasion he was known to have been buying carpets for a patron in Goa.

The Fremlin Carpet was probably commissioned by him during the last decade of his service. It measures 19 ft. X 8 ft. was designed for use as a table-cover, which explains the long rectangular proportions of the field, and the broad borders which were intended to be seen hanging down the sides of a long Jacobean oak table. (At this period carpets were not yet in general use as floor-coverings in England: as late as 1595 even the presence chamber

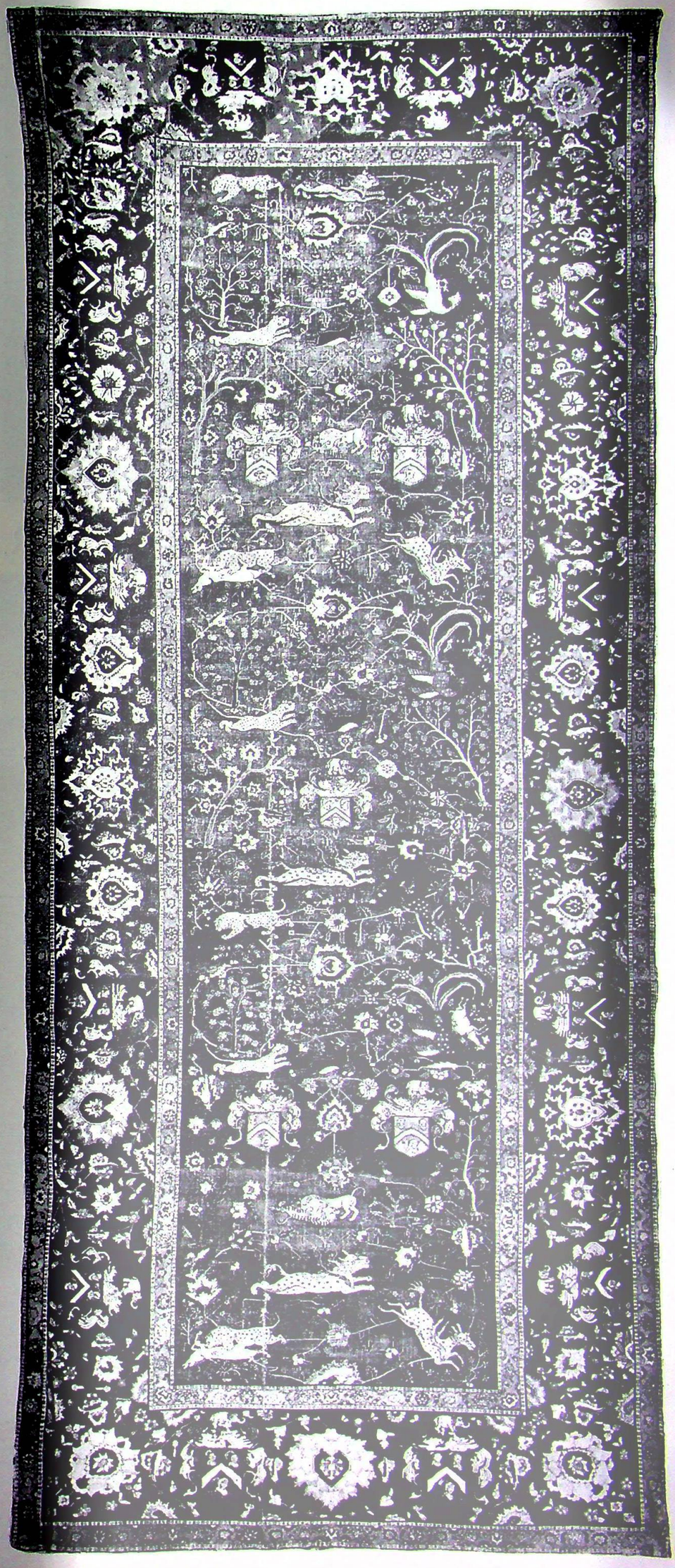
of Queen Elizabeth at Greenwich Palace had been contemptuously described by a foreigner as "strewed with hay".

The motifs and basic character of the design are Persian, the field being filled with beasts of prey and various mythical fauna including 'winged' deer and birds known as *simurghs*, interspersed with trees and floral devices. The Fremlin coat-of-arms appears five times in the field and no less than twelve times in the border where it is set among conventional palmettes and scrolling stems. The woollen pile is tied in Sehna knots on warps and wefts of cotton, with three shots of weft between each line of knots. The density is about 224 knots to the square-inch. The colours used are two shades of red, two blues, two browns, two greens and one yellow.

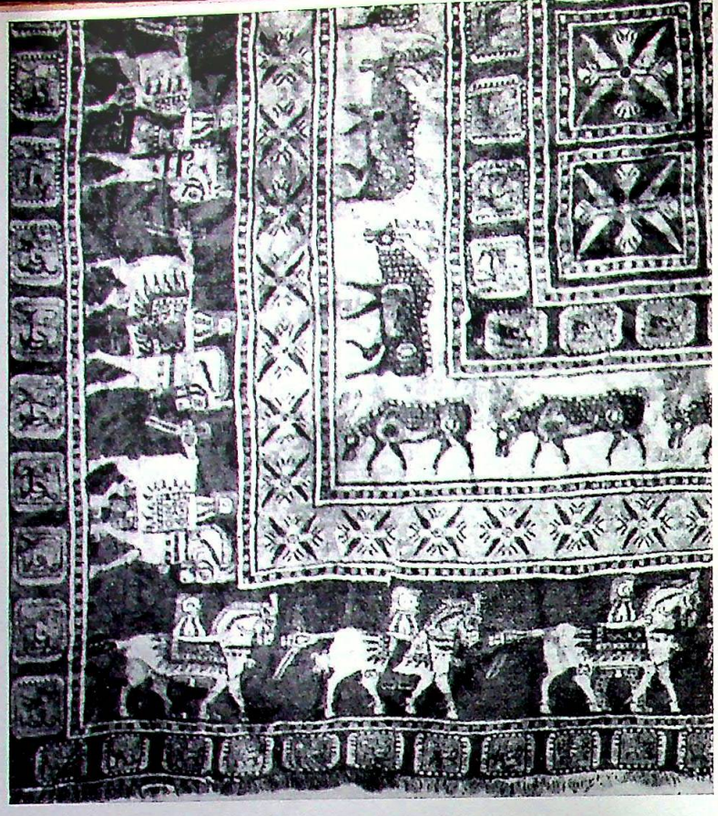
In spite of predominantly Persian features of the design, there is no doubt that this carpet was woven in India, perhaps by second or third-generation immigrant Persian craftsmen now partly Indianised. The compacts lyrical and interlacing rhythms characteristic of the true Persian prototype-design are here largely missing. Instead there is a symmetrical emphasis in the arrangement of the field, much freer spacing, and an added touch of drama and realism in the treatment of the animal-themes.

We have no detailed information about the terms on which Akbar had established the carpet manufactures of Agra and Lahore; but if, as might be expected, they were modelled on the palace industries of Safavid Persia, the weavers would have enjoyed a large measure of independence in their affairs. They would have been obliged to work for the court only on command and for the execution of specific orders, being free otherwise to negotiate private commissions or to produce for the market.

The Fremlin Carpet first came to notice in 1882 when the Fremlin arms were unidentified and it was thought to be Spanish, being published as such by Vincent Robinson in his book, *Eastern Carpets* (London, 1882). The Fremlin association is first mentioned in article in the *Times* of June 27th, 1913, by which time the carpet was in America. Later it found its way to France and appeared in a Paris auction in 1935, when it was bought by the Victoria and Albert Museum for £ 3,000.



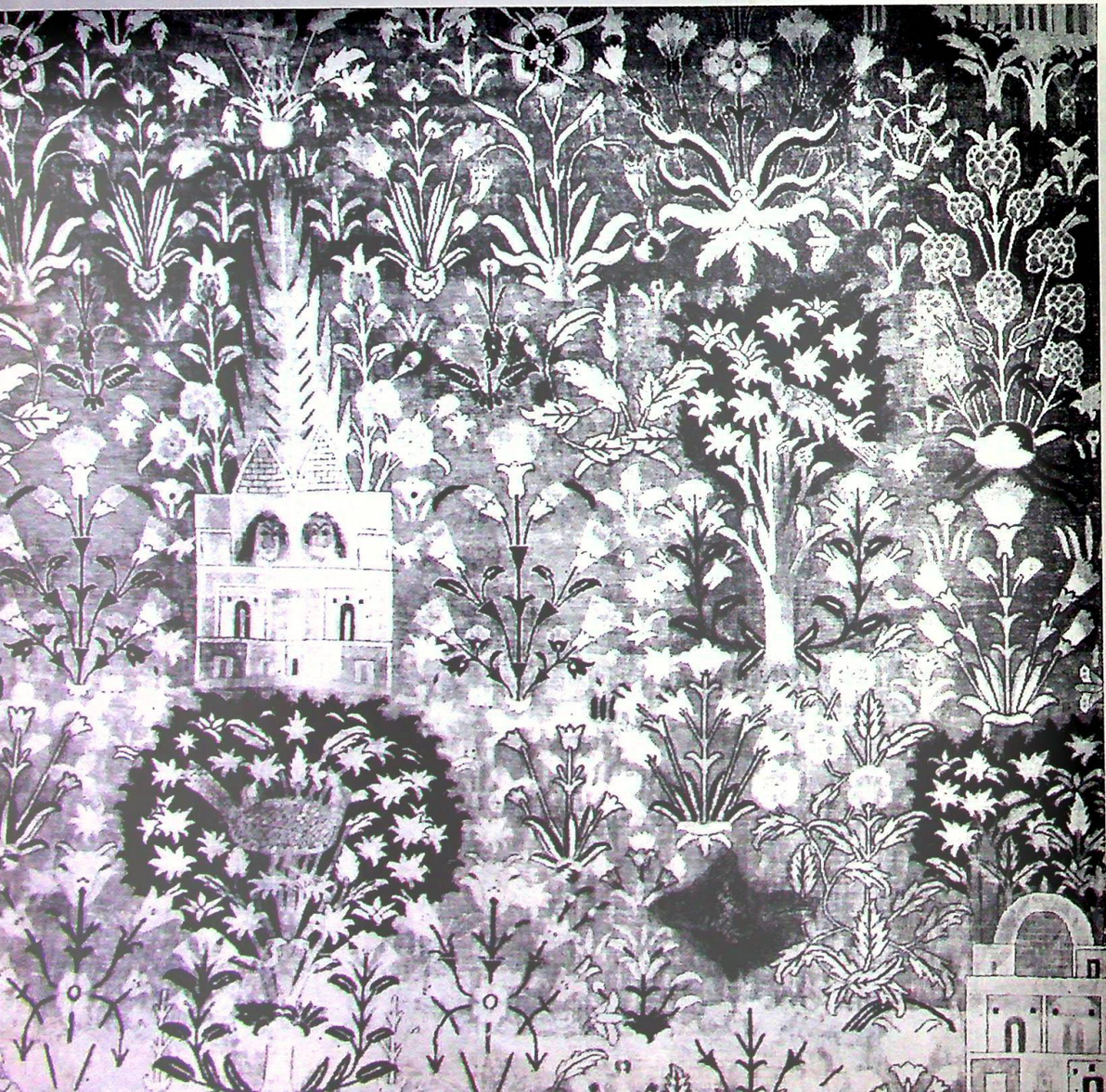
The Fremlin Carpet. Collection: Victoria and Albert Museum, London.



IMPORTANT CARPETS IN U.S.S.R.

1. *"Pazyryk Carpet"* 500 *B.C. the oldest pile carpet found in excavations done in the Altai regions, U.S.S.R. (Collection Hermitage Museum, Leningrad).*

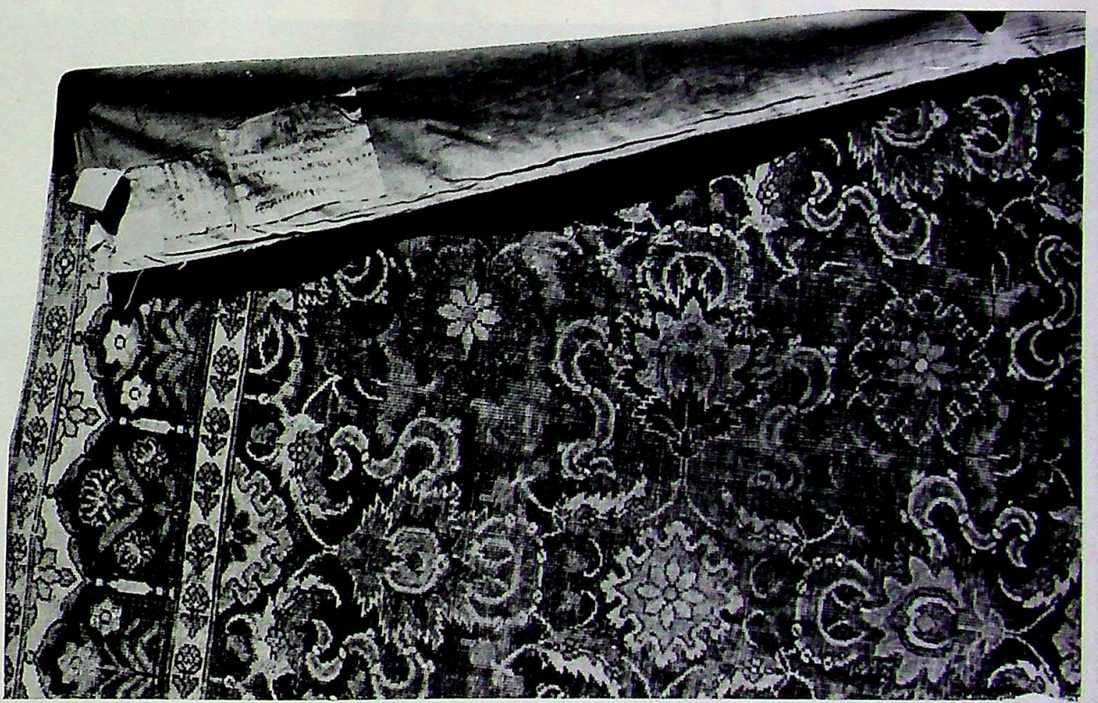
2. *A section of the Animal and Bird Carpet, similar in design to those found in Museums in U.S.A. and Europe. (Collection Hermitage Museum, Leningrad).*



3. *Fragment of Silk Carpet of 18th Century. Treatment of shrubs and trees shows its akinness to similar carpets woven in Lahore for the Jaipur collection. The introduction of European style buildings and European faces appears as though this might have been made for European markets This could quite possibly be a product of Goa which was Produced for export, to Portugal (Collection, Hermitage — Museum, — Leningrad).*

JAIPUR CARPETS

1. *A detail of a carpet design similar to Herati pattern woven in the Lahore factory in 1640 and at present in the collection of City Palace Museum, Jaipur.*
(*Photo—Ram Dhamija by courtesy H. H of Jaipur.*)



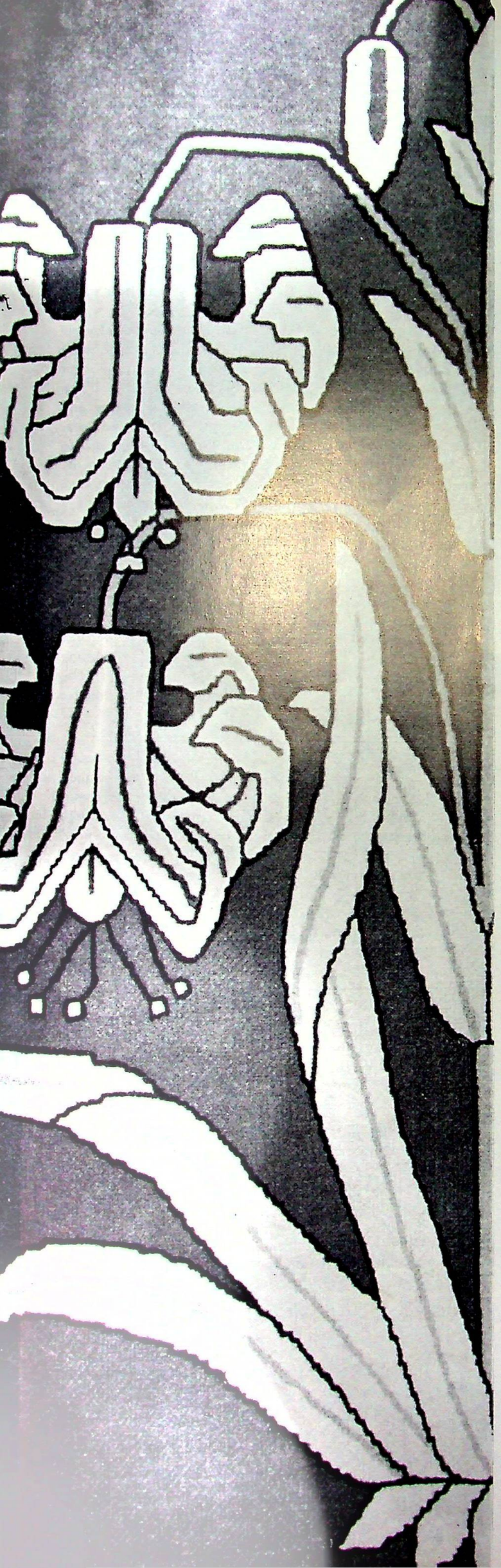
2. *The detail of a large carpet in the City Palace Museum collection. The original label of the Toshakhana dated 1101 Hijri is still fixed to the back of the carpet and is shown in the photograph. It is interesting to read the label which carries in the description the word 'Galicha Ki Dari'. Obviously the introduction of the carpet (Galicha) is still new and it is necessary in the description to affix the word Dari which has been known for many centuries as a floor covering.*
(*Photo—Ram Dhamija by courtesy H. H. of Jaipur.*)

BIJAPUR CARPET

Detail of Bijapur Carpet. Collection of local mosque, probable date of manufacture, late 17th or early 18th century.

A Moghul carpet in the collection of Bharat Kala Bhavan, Banaras. The carpet is 4' 11" x 2' 3½" and is similar to the Jaipur carpet of a similar type of design. Details of the period and the place of its weaving are not known. Because of the similarity of its design with the Jaipur carpets, it is presumed that this must have also been woven in Lahore during the same period.

(Courtesy: Bharat Kala Bhavan, Varanasi.)



SURVEY OF PILE CARPET INDUSTRY

Introduction

Many conjectures have been made on the origin of pile carpets. One point of view is that the nomadic people of the steppe lands in Central Asia were responsible for developing the pile carpet. Raw material was available to them in plenty from their herds of sheep. The natural colour of the wool gave a wide variety for the introduction of colour. Some of the early peasant and nomad carpets show how even the soft underhair of the camel were used and certain natural colours of brown and russet were woven into the carpet. The sheep and goat yielded wool in white, black, grey, brown and sometimes even a reddish brown. If necessary they could also dye the wool with indigenous dyes of the area.

Nomadic Carpets

For the nomads the pile carpet was the floor covering of their tented dwellings. They decorated their tent walls with it and used carpets as curtain for the entrance. The need for warmth of a carpet and its glowing colours to obliterate the gloom of their surrounding, leads one to believe that most probably its origin was in Central Asia. The earliest carpet yet discovered was also in Central Asia; Pazyryk carpet (collection Hermitage Museum, Leningrad) discovered in Altai mountains of Central Asia, has been dated to 500 B.C. (Ref. p. 20)

The artistic carpet was an article of common use among the Central Asian people. A rolled carpet was carried by them tied to their saddle or slung on their back. They slept on it, they spread it out to seat their guests. Even here in India we see the mobile Bhotia people moving on their horse with beautiful saddles made out of pile carpets and carrying rolled carpets as a part of their scanty belongings.

Another interesting point of view which has been put forward by Ignoz Schlozzer is that perhaps carpets are an imitation of mosaic. He traces similarity of the Pazyryk carpet design with the palace mosaic found at Ninaveh and the palace of Sennacherib at Ninaveh which, had pavements decorated with four stripes and lotus flowers. The excavations at Olynthus Macedonia have also brought to light mosaic with animals and mythological figures. This similarity of treatment need not necessarily lead us to think that carpet was a "substitute for mosaic" but it is likely that the style of designing may be common in the different fields of arts and crafts at the same period.

After the finds in the Altai region the next finds of carpet fragments were made at the burial sites at Lou Lan in Eastern Turkistan. These fragments can be dated from 1st millenium of Christian Era.

The weaving of looped materials was known to the Coptics. Though it is not a true form of pile rug manufacture yet the texture has very much in common with it. An early fragment in the Metropolitan Museum which was found in Upper Egypt can be dated to 400 A.D.

Fragments of carpets found in the ruins of old Cairo (Fustat) indicate that carpet weaving was being practised there in the 9th, 10th and 11th century A.D.

Reference in early literature to floor coverings are many and varied but it cannot be taken for granted that they refer to pile rug. Depiction of vertical looms in Egypt are to be found from very early times. It cannot be inferred that vertical looms means the weaving of carpet. Some of the early weaving on plain woven materials was also done on vertical looms. Even today the use of vertical looms is prevalent in the mountain regions where space is limited. It is only in the literary records of Arab geographers of the 8th or 9th century that clear mention of carpet industry is found. In 9th century A.D., Fars (south western Persia) in the 10th century A.D. the highlands of Qainat (N.E. Persia) are mentioned to be important centres of carpet weaving.

By that period wall paintings and miniatures found in Chinese Turkistan show representation of rugs decorated with geometrical designs and scroll work. From the 13th century A.D. onwards a number of rugs have survived which give us a fairly good idea of the prevailing style of carpets. The patterns are basically geometrical and combined with *kufic* or calligraphic patterns. Even animal forms which appear later are broken up into geometrical planes and enclosed within a square.

The effect of the Mongol conquests under Timur was far reaching. A very important aspect of Timur's conquests was that he brought together artists from various parts of the eastern and central Asian world and provided conditions for them to work together. Craftsmen from Baghdad, from Persia, Asia Minor, China and India were put together and worked within the walls of Samarkand. The inter-mingling of the craftsmen produced a synthesis of the arts of the various places.

Persian Carpet Weaving—Its influence on India:

Thus, we find in the later Persian carpets, designs derived from China, from Turkistan and from Asia Minor. Knowledge of Persian carpets of 14th and 15th century A.D. is based purely on the miniatures of the period. The designs of the period appear to be geometrical and closely resemble the Anatolian carpets. By the end of the 15th century A.D. there is a sudden change from the geometric to the arabesque. Scrolls, medallions and flowers appear on the carpet.

This change is most likely because of growing court patronage and influences. It cannot be categorically said as to which particular field of art influenced carpet designs. Perhaps the clear defined form of the rectangular carpet, with its main field divided by medallions and pendants and proportionately worked border with its smaller guards on the sides may have been influenced by the book or album covers of the period. The curvilinear scrolling designs are the influence of the book illuminators. Of the 16th century carpets a large number have survived and give us an excellent idea of the prevailing style of the period.

The carpet tradition that came down to India was basically of the Persian court. Carpets developed in Persia under court patronage were quite distinct from those being made by the tribal people for their personal use. It was during the reign of Shah Tahmasp (1524) in Persia that court factories were set up to meet the demands of the court. Here close cooperation between craftsmen, artists and patrons produced the finest carpets of Persia. Many of the patterns for the carpets were prepared from the miniature painters of the court.

Beginning of Carpet Industry in India :

Though Sir Birdwood believed that carpet manufacture existed before the Moghul Empire, there is hardly any proof to indicate that it could have been at all possible for an organised carpet industry to have grown in India. Carpets were being imported from outside and were in use in the Muslim courts.

Until the description of carpet workshops in *Ain-i-Akbari*, there is hardly any mention of carpets. Humayun Nama written by Gulbadan Begum, daughter of Babar, is written with the perception of a woman of the manners and practices of the age. She vividly describes the manners of the day Minute descriptions of festivals, receptions are given. Every item which is used is described, the type of spreads, their colouring and embroidery. Nowhere does she however make a mention of a carpet. It is quite likely that Akbar was responsible for the import of workers from Persia. Abul Fazal describes how every effort was made to keep them happy and make them settle in the country. Grants of lands were given to them. In addition to their salaries, food, clothing and lodging were provided. Pensions were granted to those who were not able to work. The children of master-craftsmen were employed so as to carry on this tradition. All these points to the fact as to how precious the skill was and how serious were the attempts of the Emperor to keep the craftsmen happy and settled.

Very few examples of carpets which can be dated are to be found of the early Moghul period. The best collection of dated carpets in India is with His Highness of Jaipur. The others are distributed in collections abroad. The varying styles of carpets and their growth and development can only be conjectured from depiction of carpets appearing in miniatures of the period. Historical records mention again and again that carpets were being imported in large numbers from outside also.

Depiction of Carpets in Moghul Miniatures :

In the paintings of Akbar period and early Jehangir period, carpets are shown being used for seating the main characters. The basic composition which is repeated again and again is of a blue carpet with a yellow border. The carpet has an all over pattern of curvilinear leaves and stems with palmettes and flowers worked into the area. The border appears to be of a continuous flowing pattern having a central flower with two stems emanating from it. In the paintings of late Akbar and early Jehangir periods a variation appears. A court scene of *Anwar-i-Sahaili* 1596/7 A.D., painting by Baswan, shows the king seated on a throne at a higher level while he watches the people below who are seated on a large carpet. Though the carpet has a blue background the design is very clearly delineated. The medallion in the centre is divided into separate areas which are distinct because of their colour combination. Two pendants are in the side end of the carpet and half pendants rest on the side of the border. Palmettes and interlacing scroll work form the basic pattern of the ground. The main border with its flowing pattern has two smaller borders on each side as guards.

In a painting of early Jehangir period (1615), Jehangir is seated on a carpet in a pavilion watching the women bathe in the pool. The carpet has a blue background with a central medallion and side corners of one-fourth of the medallion are worked in red and show a typical carpet design. In the Album of Persian and Indian miniatures, (collection Hermitage Museum, Leningrad), a painting of Shah Abbas by the artist Vishnu Das painted in the first quarter of 17th century shows Shah Abbas seated on a platform in a garden. The carpet on which his chair is placed has a blue field with an all over pattern. A central medallion of golden colour with quarter medallion at the corner and small half pendants on the sides of the carpets are to be seen here. The border, which is golden in colour, has a well defined broad border, with small guards on both sides. The division of the area in the border is reminiscent of the geometrical breaking up of the surface for *kufic* decoration.

Use of Similar Motifs in Moghul Monuments and Carpets :

The arabesque pattern on a blue background which appears again and again in the carpets reproduced in paintings of Akbar and early Jehangir period, can be seen painted on the walls of Sikandara, Akbar's tomb near Agra. It is interesting to compare the treatment of walls in

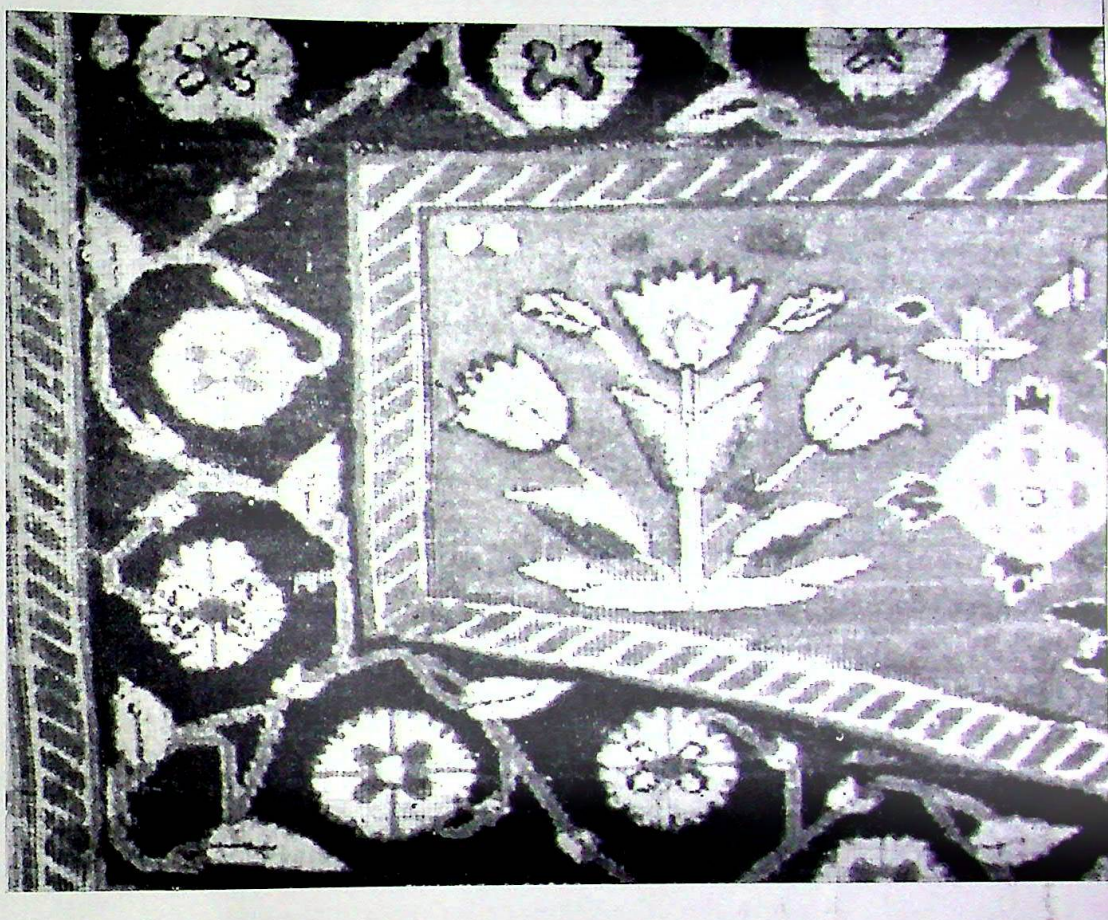
1. *17th century pictorial carpet has been reproduced successfully in Srinagar by the East India Carpet Company. (Photo—Jasleen Dhamija.)*

2. *Provincial Moghul (Oudh) 1750-60 Prince and ladies celebrating the spring festival—from Osterreichische National Bibliothik, Vienna—carries a carpet in the centre of the painting which is very similar in design to the Jaipur carpet woven in 1689-90.*

Sikandara to the treatment of the walls in paintings of the period. The miniatures of the period show the same patterns like tile mosaics on the walls and floor as are to be found on the walls of Sikandara. The geometrical mosaic patterns are painted with soft colours of rosy pink and light blue and green worked hexagon, circles and stars on the lower parts of the wall, while above it are patterns painted in deep blue with arabesque designs as they appear on some of the walls in miniatures and more often on the carpets.

Historical Carpets:

The earliest dated carpet which has survived, according to the recent publications, is a carpet carrying designs of interlinked birds and animal forms, fragments of which are available in various museums. According to Stuart C. Welch it is the earliest Indian carpet available in collections abroad. The strange thing is that the border of the carpet has not been traced with the fragments of the body which are distributed in various museums. The stylised beast forms disgorging each other, creates a



3. Detail of a Moghul carpet design—Collection: Bharat Kala Bhavan, Banaras Hindu University, Banaras. Compare the motifs in the carpet shown in the painting in the earlier plate with the Moghul carpet. The border design is exactly the same and so is the tulip motif in the body.

The tomb of Itimad-ud-Daula has intricate patterns inlaid in marble and some of these very patterns one finds in the carpet designs. An interesting motif of a medallion with two pendants, which is typical of a carpet design, has been inlaid in the inner room of the tomb. The same pattern is found in the medallions of the carpets depicted in paintings of later Jehangir period.

An interesting painting of early 18th century "Provincial Moghul" (Fig. 2) which has been painted in Oudh shows a prince feasting in the garden. A large carpet spread in the garden is in the centre of the painting and carries the patterns of individual flowering shrubs, exactly similar to the Jaipur carpets which have now been proved to be a product of Lahore court carpet factory. The only difference in the Jaipur carpet designs and the depiction of the carpet in the paintings is that animal motifs are intermingled with the flowering shrubs. It is obvious that these patterns were common and were in use in many of the courts in India. This close similarity of the existing carpets of the period and depiction of carpets in paintings, confirms the hypothesis that the carpets shown in the miniatures were not from the fancy or imagination of the painter, but depictions of actual pieces in use at the time.

powerful pattern but does not appear to be essentially Indian. The central head of the lion in the illustration given in the Art of Moghul India, Plate 21, by Stuart C. Welch, bears a resemblance to the Central Asian use of the motif. The pattern has a startling resemblance to the border of a Persian carpet dated 16th century which has been reproduced in a book on carpets by Dr. Hendley. The carpet is shown to be in the collection of Victoria and Albert Museum, London.

The pictorial carpet (Museum of Fine Arts, Boston) is truly and unmistakably Indian. It completely violates the tradition of a carpet which is meant to be spread on the floor and creates a form meant to be seen hanging on a wall. Here the real and the mythical mingle together. In the thick foliage a winged bird attacks a mythical winged beast with a lion's body and elephant's trunk. Freely drawn elephants, reminiscent of the elephants drawn on the ceiling of Ajanta caves, form a circle around the winged beast which had been attacking them. The whole carpet appears to be surcharged with action. The ibex flies from a lion which has sprung for the kill, a tiger stalks his prey stealthily, while a hunting leopard chained to a bullock-cart is being carried on by an alarmed bullock which appears to be speeding away (Fig. 1).

Away from the forest, life in the mansion proceeds in a leisurely fashion. On the open terrace of the house the Shehnai player is busy while two men are conversing below. In the women's quarter the Toran, a sign of festivity and welcome, is hung and the women are busy in their daily routine. The general style of men's clothing, the black tassels on the jewellery of the women, show the influence of early Malwa painting.

The richness and beauty of the work points to the influence of a highly creative artist, at whose suggestions and perhaps on whose drawing the carpet has been created. According to Mr. Ellis the lower part of the carpet which shows the chase compares closely to a Nara Chinese table. The figure of the winged beast attacking the elephants and in turn being attacked by a bird has been used in the painting of a 'chatri' at Jaipur.

The naturalism and the vibrant quality of the work is unmistakably and typically Indian. Some of the motifs may have been taken from outside, but in their juxtaposition they have been made to conform to the Indian tenets of fine art.

The earliest carpets in India which can be accurately dated, are in the Jaipur Maharaja's collection. Very valuable work has been done by Dr. Hendley in identifying and cataloguing them. The carpets nearly all belong to 1101 Hijri which would fall according to Georgian Calendar between 1689 and 1690. The Jaipur carpets are of very large sizes and some of them have been woven according to the requirements of the Amber palace. Cotton warp and three cotton wefts with Sehna knotting of wool is a common feature in all of them. Majority of the carpets have a red background with dark borders. The carpets made specially to order have a small border with the ground filled in with bold patterns of bushes with variegated flowers.

The Girdler's carpet with its red background and palmette design all over the body is very similar to the larger carpets in the Jaipur collection. The patterns are derived from Persia but the simplification of the design and the boldness in its representation and vivid colouring gives it quite a distinctive character from the Persian carpet.

The use of the varying flower motifs with an eye to detail and realism is typically Indian. In the Persian carpet the natural objects are crystallised into idealised formula. In the Indian carpets the natural objects were studied for themselves and the vitality of the natural objects was retained. It was this interest in reality which brought about the transmutation from Persian highly stylised forms of objects–which had taken the original shape and transformed it into a decorative design, to the more naturalistic form of designing. This gives us the difference in the development of the carpet designs of Moghul India from the Persian carpets, which were the root of the carpet tradition of India.

Though the carpet industry was initiated by Akbar, the finest carpets were woven during the reign of Shahjehan. The Persian weavers who had been brought to India and settled in Lahore and Agra, had by that time inter-married and had absorbed the traditions of the country. The influence of court patronage as well as of the existing style of painting was responsible for developing distinctive style of carpet manufacture during that period. The Girdler's carpet, the Fremlin carpet and other finer products of the period must have been produced during Shahjehan's reign.

An interesting carpet design produced in Moghul India was the 'Barjasta'. In this, the design was worked out in pile work, whereas the rest of the body was woven in the plain weave of Dari with the use of gold thread (zari). The shimmering gold background with the raised pile work which was higher at the centre of the piling and was rounded off to merge into the ground was a typical development of the age with its fondness for rich effects. Silken pile replaced the woollen pile work. A few pieces are still available of these carpet designs in the museums. Most of them appear to have been made as hangings or as *Purdahs* (door curtains). The National Museum, New Delhi, has two excellent examples of this type of carpet. The tree motif fills the entire surface and the background which is now dulled was originally of zari. Deep crimson red is the colour of the background. The pile has been done in the olive green or Mehndi (Henna) green. One can imagine that the freshly woven carpet must have been a sumptuous article. These items are rare but appear to be an interesting variation from the Barjastas of Persia. The love of the Indian for the richness of the gold thread and his use of the technique for the sake of its decorative form, shows how technique has been adapted by the Indian craftsman to suit his own temperament.

With the end of the Moghul empire the carpet tradition of India received a setback. The discriminating patronage of the princely houses was lost to them. The best examples of carpets were sent out of the country, with the result that the workers had no good samples to refer to while producing carpets. The carpet industry was revived by the middle of 19th century by commercial firms who realised that a market in Europe existed for hand-woven carpets. The revival of the industry was carried out by outsiders and not by local patrons of art who would have understood the art traditions of the country. The commercial houses wanted to organise trade and began producing articles according to requirements received from outside. No attempt was made to revive the traditions of carpet industry which had been built up during the Moghul period. Mostly copies of Persian carpets were reproduced in India and often were sold by Commercial houses as Persian carpets. In India they were called Indo-Isphan, Indo-Kirman, but as soon as it left the coast of India the word 'Indo' was dropped.

The Album of Oriental Carpets brought out by Vienna, with excellent reproductions in colour of the old Persian carpet designs, was also responsible for eliminating any differences in style developed by different carpet centres. Most of the centres began reproducing the designs from the plates of the Vienna Album.

The carpet industry in India became imitative. Excellent reproductions were made of Isphan, Kirman, Bokhara, Kazak, Turkmani carpets. The designers became experts in reproducing designs from plates. They, however, lost the ability of creative designing.

Kashmir, however, produced the finest carpets. The influence of the shawl industry on the carpets gave it an individual character of its own. The '*Talim*' which is a distinctive feature of the Kashmir carpet industry was adopted from the Kani shawl weaving. The introduction of shawl patterns in the carpets in Kashmir has created a new style of carpets which is typically Indian. The need in the carpet industry of India is for creative designers, who understand the medium, for revitalising the industry. Research in carpet designs is essential so that India can once again build up a reputation for distinctive designs in its carpet industry.

—JASLEEN DHAMIJA

A copy of the Ardebil, recently produced in Srinagar. Courtesy, All India Handicrafts Board. (Photo by Jasleen Dhamija)

Detail of a Bhutia Saddle Carpet from Kumaon, U.P. Courtesy, All India Handicrafts Board. (Photo by Ram Dhamija)

UTTAR PRADESH

The earliest chronicle which records carpet weaving in U.P. is Abul Fazal's *Ain-i-Akbari*. He mentions weaving of carpets in Allahabad and Jaunpur.

Mirzapur and Bhadhoi:

The beginning of the industry in Mirzapur and Bhadhoi, so the legend goes was started by outsiders during Moghul times and is parallel with the Shah Abbas period in Persia. The story goes that a caravan travelling on the grand trunk route was looted and most of the people killed. One of the persons who escaped the looters, was a weaver of carpets. He was given shelter by a village nearby. He settled down in the village and taught the villagers this craft in gratitude for their having saved his life. Luqman Hakim is even to-day worshipped. Some say he was a Nubian slave, others that he was a Persian carpet weaver. The carpet weavers celebrate the last Wednesday in the month after Moharram as his day.

The village in which he settled down was Ghosia. The craft spread to the nearby village Madho Singh and others. The industry began in a village and has even today retained its cottage character. The majority of the weavers work on the land as well as weave carpets. They are helped by their families. The women do the spinning of the yarn, if the wool is handspun. They also make the balls of wool from hanks and help in the warping operation. The weaving is done by the adults and the children together. Hindus as well as Muslims practice this craft. Amongst the Hindus the agricultural castes such as *Ahirs* and *Kewats* are predominant. Amongst Muslims are the *Kalin-bafs* and *Julahas*. Earlier this area used to be well known for its indigo plantations. The English indigo firms employed a number of people. After the manufacture of chemical blue which quickly took away the market for indigo, the indigo plantations closed down and some of the firms encouraged carpet industry for which the demand was growing in the West by the middle of 19th century. Some of the English carpet companies working today, were originally indigo companies.

Mirzapur Bhadhoi area is today the most important area for carpet weaving as it employs the largest number of persons and the bulk of the export trade is from this area.

Carpet industry is controlled by manufacturers-cum-exporters on one hand and by the loom owners on the other. The manufacturer-cum-exporter supplies the designs and raw material to the loom owner who fix the looms, engages weavers and also deliver the woven carpet. The payment is made on the basis of a contract entered with the loom owner. The finishing of the carpet, however,

is always done in the factory or premises of the manufacturer-cum-exporter. The loom weaver bears the cost of transporting raw material and carpets, as well as is responsible for supervision of the work.

There is another class of middlemen known as *Guchi-walas*. They use their own raw material for weaving carpets, according to the agreed rates. The carpets are then finished by them and sold to the exporters.

There is another system known as the *bazar* system where the middle man produces the carpets at his own risk, finishes them and tries to sell them through his own efforts to the exporter or local sellers.

The worker remains a wage earner and very rarely enters directly into any contract with exporter. There was only one cooperative society in Bhadhoi in 1960 and that too did not function very well.

The industry is spread over nearly five hundred villages around about Bhadhoi, Mirzapur, Khamaria and Gopi gunj etc.

According to a survey conducted by the All India Handicrafts Board in 1960 there are approximately fifty thousand weavers in U.P. and twenty thousand others employed in the ancillaries to the carpet industry.

Manufacturing Processes:

The wool is received in its raw state and is first sorted out according to the colours white, grey, fawn etc. This work is generally done by the men and women in their spare time. After this carding is done by the help of carding machines, spinning is then done by women and children.

The spinning of yarn is very poorly paid as it is mostly done by women. After this the spun yarn is collected and converted into '*Batias*' or '*hanks*' within the premises of the manufacturer or yarn merchant and is ready for dyeing.

Previously dyeing of wool was with the use of vegetable colours but now with the use of chemical dyes there is not a single dyer who is knowledgeable about vegetable dyeing.

The method of dyeing followed all over the area is generally the open pot dyeing method. This is rather a crude method as neither the heat can be controlled nor the yarn turned, to ensure uniformity in the absorption of colours.

A few of the larger manufacturers have introduced open dye vat method which is an improvement to the other. Small boilers have been installed for generating steam. The vats are of wood and are rectangular in shape. Heating is done by steam jets which are controlled.

Most of the dyeing is in acid colours. Some of the leading manufacturers use chrome dyes so as to produce shades fast to chemical wash. Cotton yarn used for backing in superior quality carpet is also dyed to match the ground shade of carpets.

The weaving procedure:

The carpets are woven on vertical pit looms of varying sizes ranging from five feet to about sixty feet. Generally three to five weavers work on a loom depending upon the size of the carpet, they are mostly young boys working as apprentices under the guidance of the master weavers.

The warp is prepared out of twisted cotton for finer weaves and sometimes out of jute twine for the rougher qualities. For the Bokharas even a woollen warp is prepared.

The design to be woven is generally prepared by the designer from photograph or a plate received from the manufacturer. Most of the manufacturers are making items to order and as the bulk of the production is exported outside the country's design, quality and colours are dictated by fashion trends abroad. The designers work out the patterns on the basis of instructions received. The design is prepared on a graph paper, which is specially prepared for this type of work, as the number of squares in an inch vary according to the number of stitches in an inch. The job of the designer is an extremely skillful one, as he has to work out the entire design on the graph paper, colour it and make a colour chart on the basis of which the wool to be used in the carpet is dyed. The weaver ties the ball of thread on the top of the loom with the help of a string and the threads hang easily in the reach of the weavers. With the *churi* (knife) in one hand, he twists the thread into two warp threads for single weaving and makes the *Senhe* knot. Double knotting has now become very common and is known as *doutapki*. The weft thread which is thrown across is white cotton and is thrown twice and then the carpet is beaten down by the *punja* the metal comb like instrument having a wooden handle. This is a very heavy instrument and can knock in enormous weights of weft. The *thari* is really stout here and can take a lot of wear.

The carpet industry around Mirzapur, Bhadhoi, produces carpets as per demand of the buyers. They are equipped to produce any type of carpet of the medium quality. The knotting of the carpet is generally upto sixty knots or so per square inch. They have introduced into the production the French Abusson and Savonnerie designs, and the Chinese sculptured carpets. This type of weaving does not require very many number of knots per square inch is suited to the production of the sculptured carpets of the French and Chinese designs. Oriental designs are also prepared. Though they have a very limited production. The delicate curvilinear patterns demand a much finer weave.

Today there is growing demand for the finer quality oriental carpets and a number of manufacturers are taking it up. There is a great deal of competition and each manufacturer tries to keep an eye on what the other is doing. Under selling and undercutting is quite often resorted to and quality is sacrificed. Major part of the production is directly exported and the designs are not even seen in the country.

AGRA

AGRA must have been weaving carpets during the Moghul times. Lahore factory we know was established by Akbar, we can therefore assume that weaving in Agra may have begun during that period also. As was the case of the industry throughout Northern India, with fall of the Moghul Empire the industry met with a severe setback. A few *Kalin-bafs* continued to practice this craft supplying the requirements of the smaller *zamindars* etc. The industry was, however, reorganised by the second quarter of 19th century with the idea of exporting carpets out of the country by a German firm Weyland and Co. In 1921 the company was bought over by East India Carpet Company.

Two of the oldest firms still continue the trade. The Kailash Carpet Co. and The East India Carpet Co. The bulk of the weavers in the carpet industry were *Muslims* and migrated from Agra to Pakistan in large numbers. Only a few people have been left behind, and the quantity produced is nothing like what it used to be in 1928 when some three thousand weavers worked full time. However the quality is still there, specially in firmness of structure and excellence of workmanship. In this town the best work has been done in the medium-fine grades.

An unusual feature of the Agra weaving technique is the calling out of the design or *phera bolna*. The master weaver alone sees the design and calls out to each weaver in turn, in a language of his own, where light blue is *mithi*, dark blue is *gahri*, medium blue is *surmai*, after what colour is to be put on each knot. This appears to be quite complex, but in fact it is relatively simple, because it depends on what may be called 'continuation of colour' in a design. A colour that has been used in a knot in one row, can, in the next row, either be used in the knot on top of it, or in the knot on the right of that, or in the knot on the left of that, or it can cease to be used and another colour commenced. These directions are required only for the outlines of the motifs, and are quite efficiently communicated and understood.

The designs used by the Agra industry are of all sorts, including Persian, Bokhara, French and Chinese. The market for these carpets is principally in the United States of America. The carpet industry here is a whole-time business. The system of cottage craft was not found here earlier with the result that the industry produced a finer variety of carpets than that being produced in Mirzapur, Bhadhoi. The industry is at present producing three types of carpets. Persian, Turkoman and French. In the Persian they are the Isfahan, Kashan, the Mouri are the only Turkoman carpets produced. The bulk of the production is of the Abusson and Savonnerie. Wine red and cream are the popular background for the French carpets.

SHAHJAHANPUR

The carpet weaving industry was started by Hussain Khan, a dacoit who was imprisoned in Shahjahanpur. In the jail he learnt the technique of cotton carpet weaving and after his release he settled down in the town and practiced the craft to earn his livelihood.

Today there are nearly five hundred families engaged in the industry. Each family has on an average two looms and four to five family members work on the carpet. Approximately two thousand to two thousand five hundred people are working on one thousand looms in Shahjahanpur.

The industry is run on the basis already described for Mirzapur area. The weaver works in his cottage. The raw material is supplied to him and the finished goods taken back, fifty seven establishments of dealers control the entire industry.

There are two co-operative societies which are working at present. Both having a membership of forty five persons. The Kaleen Bunkar Udyog Sahakari Samiti, Sadar Bazar, Shahjahanpur has so far received Rs. 500/- as working capital loan, from the Industries Department for its 25 workers. This is in-adequate and cannot meet the requirement of even half a dozen weavers. The

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Persian Carpet Weaving—Its influence on India:

Thus, we find in the later Persian carpets, designs derived from China, from Turkistan and from Asia Minor. Knowledge of Persian carpets of 14th and 15th century A.D. is based purely on the miniatures of the period. The designs of the period appear to be geometrical and closely resemble the Anatolian carpets. By the end of the 15th century A.D. there is a sudden change from the geometric to the arabesque. Scrolls, medallions and flowers appear on the carpet.

This change is most likely because of growing court patronage and influences. It cannot be categorically said as to which particular field of art influenced carpet designs. Perhaps the clear defined form of the rectangular carpet, with its main field divided by medallions and pendants and proportionately worked border with its smaller guards on the sides may have been influenced by the book or album covers of the period. The curvilinear scrolling designs are the influence of the book illuminators. Of the 16th century carpets a large number have survived and give us an excellent idea of the prevailing style of the period.

The carpet tradition that came down to India was basically of the Persian court. Carpets developed in Persia under court patronage were quite distinct from those being made by the tribal people for their personal use. It was during the reign of Shah Tahmasp (1524) in Persia that court factories were set up to meet the demands of the court. Here close cooperation between craftsmen, artists and patrons produced the finest carpets of Persia. Many of the patterns for the carpets were prepared from the miniature painters of the court.

Beginning of Carpet Industry in India :

Though Sir Birdwood believed that carpet manufacture existed before the Moghul Empire, there is hardly any proof to indicate that it could have been at all possible for an organised carpet industry to have grown in India. Carpets were being imported from outside and were in use in the Muslim courts.

Until the description of carpet workshops in *Ain-i-Akbari*, there is hardly any mention of carpets. Humayun Nama written by Gulbadan Begum, daughter of Babar, is written with the perception of a woman of the manners and practices of the age. She vividly describes the manners of the day Minute descriptions of festivals, receptions are given. Every item which is used is described, the type of spreads, their colouring and embroidery. Nowhere does she however make a mention of a carpet. It is quite likely that Akbar was responsible for the import of workers from Persia. Abul Fazal describes how every effort was made to keep them happy and make them settle in the country. Grants of lands were given to them. In addition to their salaries, food, clothing and lodging were provided. Pensions were granted to those who were not able to work. The children of master-craftsmen were employed so as to carry on this tradition. All these points to the fact as to how precious the skill was and how serious were the attempts of the Emperor to keep the craftsmen happy and settled.

Very few examples of carpets which can be dated are to be found of the early Moghul period. The best collection of dated carpets in India is with His Highness of Jaipur. The others are distributed in collections abroad. The varying styles of carpets and their growth and development can only be conjectured from depiction of carpets appearing in miniatures of the period. Historical records mention again and again that carpets were being imported in large numbers from outside also.

Depiction of Carpets in Moghul Miniatures :

In the paintings of Akbar period and early Jehangir period, carpets are shown being used for seating the main characters. The basic composition which is repeated again and again is of a blue carpet with a yellow border. The carpet has an all over pattern of curvilinear leaves and stems with palmettes and flowers worked into the area. The border appears to be of a continuous flowing pattern having a central flower with two stems emanating from it. In the paintings of late Akbar and early Jehangir periods a variation appears. A court scene of *Anwar-i-Sahaili* 1596/7 A.D., painting by Baswan, shows the king seated on a throne at a higher level while he watches the people below who are seated on a large carpet. Though the carpet has a blue background the design is very clearly delineated. The medallion in the centre is divided into separate areas which are distinct because of their colour combination. Two pendants are in the side end of the carpet and half pendants rest on the side of the border. Palmettes and interlacing scroll work form the basic pattern of the ground. The main border with its flowing pattern has two smaller borders on each side as guards.

In a painting of early Jehangir period (1615), Jehangir is seated on a carpet in a pavilion watching the women bathe in the pool. The carpet has a blue background with a central medallion and side corners of one-fourth of the medallion are worked in red and show a typical carpet design. In the Album of Persian and Indian miniatures, (collection Hermitage Museum, Leningrad), a painting of Shah Abbas by the artist Vishnu Das painted in the first quarter of 17th century shows Shah Abbas seated on a platform in a garden. The carpet on which his chair is placed has a blue field with an all over pattern. A central medallion of golden colour with quarter medallion at the corner and small half pendants on the sides of the carpets are to be seen here. The border, which is golden in colour, has a well defined broad border, with small guards on both sides. The division of the area in the border is reminiscent of the geometrical breaking up of the surface for *kufic* decoration.

Use of Similar Motifs in Moghul Monuments and Carpets :

The arabesque pattern on a blue background which appears again and again in the carpets reproduced in paintings of Akbar and early Jehangir period, can be seen painted on the walls of Sikandara, Akbar's tomb near Agra. It is interesting to compare the treatment of walls in

1. *17th century pictorial carpet has been reproduced successfully in Srinagar by the East India Carpet Company. (Photo—Jasleen Dhamija.)*

2. *Provincial Moghul (Oudh) 1750-60 Prince and ladies celebrating the spring festival—from Osterreichische National Bibliothik, Vienna—carries a carpet in the centre of the painting which is very similar in design to the Jaipur carpet woven in 1689-90.*

Sikandara to the treatment of the walls in paintings of the period. The miniatures of the period show the same patterns like tile mosaics on the walls and floor as are to be found on the walls of Sikandara. The geometrical mosaic patterns are painted with soft colours of rosy pink and light blue and green worked hexagon, circles and stars on the lower parts of the wall, while above it are patterns painted in deep blue with arabesque designs as they appear on some of the walls in miniatures and more often on the carpets.

Historical Carpets:

The earliest dated carpet which has survived, according to the recent publications, is a carpet carrying designs of interlinked birds and animal forms, fragments of which are available in various museums. According to Stuart C. Welch it is the earliest Indian carpet available in collections abroad. The strange thing is that the border of the carpet has not been traced with the fragments of the body which are distributed in various museums. The stylised beast forms disgorging each other, creates a

3. Detail of a Moghul carpet design—Collection: Bharat Kala Bhavan, Banaras Hindu University, Banaras. Compare the motifs in the carpet shown in the painting in the earlier plate with the Moghul carpet. The border design is exactly the same and so is the tulip motif in the body.

The tomb of Itimad-ud-Daula has intricate patterns inlaid in marble and some of these very patterns one finds in the carpet designs. An interesting motif of a medallion with two pendants, which is typical of a carpet design, has been inlaid in the inner room of the tomb. The same pattern is found in the medallions of the carpets depicted in paintings of later Jehangir period.

An interesting painting of early 18th century "Provincial Moghul" (Fig. 2) which has been painted in Oudh shows a prince feasting in the garden. A large carpet spread in the garden is in the centre of the painting and carries the patterns of individual flowering shrubs, exactly similar to the Jaipur carpets which have now been proved to be a product of Lahore court carpet factory. The only difference in the Jaipur carpet designs and the depiction of the carpet in the paintings is that animal motifs are intermingled with the flowering shrubs. It is obvious that these patterns were common and were in use in many of the courts in India. This close similarity of the existing carpets of the period and depiction of carpets in paintings, confirms the hypothesis that the carpets shown in the miniatures were not from the fancy or imagination of the painter, but depictions of actual pieces in use at the time.

powerful pattern but does not appear to be essentially Indian. The central head of the lion in the illustration given in the Art of Moghul India, Plate 21, by Stuart C. Welch, bears a resemblance to the Central Asian use of the motif. The pattern has a startling resemblance to the border of a Persian carpet dated 16th century which has been reproduced in a book on carpets by Dr. Hendley. The carpet is shown to be in the collection of Victoria and Albert Museum, London.

The pictorial carpet (Museum of Fine Arts, Boston) is truly and unmistakably Indian. It completely violates the tradition of a carpet which is meant to be spread on the floor and creates a form meant to be seen hanging on a wall. Here the real and the mythical mingle together. In the thick foliage a winged bird attacks a mythical winged beast with a lion's body and elephant's trunk. Freely drawn elephants, reminiscent of the elephants drawn on the ceiling of Ajanta caves, form a circle around the winged beast which had been attacking them. The whole carpet appears to be surcharged with action. The ibex flies from a lion which has sprung for the kill, a tiger stalks his prey stealthily, while a hunting leopard chained to a bullock-cart is being carried on by an alarmed bullock which appears to be speeding away (Fig. 1).

Away from the forest, life in the mansion proceeds in a leisurely fashion. On the open terrace of the house the Shehnai player is busy while two men are conversing below. In the women's quarter the Toran, a sign of festivity and welcome, is hung and the women are busy in their daily routine. The general style of men's clothing, the black tassels on the jewellery of the women, show the influence of early Malwa painting.

The richness and beauty of the work points to the influence of a highly creative artist, at whose suggestions and perhaps on whose drawing the carpet has been created. According to Mr. Ellis the lower part of the carpet which shows the chase compares closely to a Nara Chinese table. The figure of the winged beast attacking the elephants and in turn being attacked by a bird has been used in the painting of a 'chatri' at Jaipur.

The naturalism and the vibrant quality of the work is unmistakably and typically Indian. Some of the motifs may have been taken from outside, but in their juxtaposition they have been made to conform to the Indian tenets of fine art.

The earliest carpets in India which can be accurately dated, are in the Jaipur Maharaja's collection. Very valuable work has been done by Dr. Hendley in identifying and cataloguing them. The carpets nearly all belong to 1101 Hijri which would fall according to Georgian Calendar between 1689 and 1690. The Jaipur carpets are of very large sizes and some of them have been woven according to the requirements of the Amber palace. Cotton warp and three cotton wefts with Sehna knotting of wool is a common feature in all of them. Majority of the carpets have a red background with dark borders. The carpets made specially to order have a small border with the ground filled in with bold patterns of bushes with variegated flowers.

The Girdler's carpet with its red background and palmette design all over the body is very similar to the larger carpets in the Jaipur collection. The patterns are derived from Persia but the simplification of the design and the boldness in its representation and vivid colouring gives it quite a distinctive character from the Persian carpet.

The use of the varying flower motifs with an eye to detail and realism is typically Indian. In the Persian carpet the natural objects are crystallised into idealised formula. In the Indian carpets the natural objects were studied for themselves and the vitality of the natural objects was retained. It was this interest in reality which brought about the transmutation from Persian highly stylised forms of objects–which had taken the original shape and transformed it into a decorative design, to the more naturalistic form of designing. This gives us the difference in the development of the carpet designs of Moghul India from the Persian carpets, which were the root of the carpet tradition of India.

Though the carpet industry was initiated by Akbar, the finest carpets were woven during the reign of Shahjehan. The Persian weavers who had been brought to India and settled in Lahore and Agra, had by that time inter-married and had absorbed the traditions of the country. The influence of court patronage as well as of the existing style of painting was responsible for developing distinctive style of carpet manufacture during that period. The Girdler's carpet, the Fremlin carpet and other finer products of the period must have been produced during Shahjehan's reign.

An interesting carpet design produced in Moghul India was the 'Barjasta'. In this, the design was worked out in pile work, whereas the rest of the body was woven in the plain weave of Dari with the use of gold thread (zari). The shimmering gold background with the raised pile work which was higher at the centre of the piling and was rounded off to merge into the ground was a typical development of the age with its fondness for rich effects. Silken pile replaced the woollen pile work. A few pieces are still available of these carpet designs in the museums. Most of them appear to have been made as hangings or as *Purdahs* (door curtains). The National Museum, New Delhi, has two excellent examples of this type of carpet. The tree motif fills the entire surface and the background which is now dulled was originally of zari. Deep crimson red is the colour of the background. The pile has been done in the olive green or Mehndi (Henna) green. One can imagine that the freshly woven carpet must have been a sumptuous article. These items are rare but appear to be an interesting variation from the Barjastas of Persia. The love of the Indian for the richness of the gold thread and his use of the technique for the sake of its decorative form, shows how technique has been adapted by the Indian craftsman to suit his own temperament.

With the end of the Moghul empire the carpet tradition of India received a setback. The discriminating patronage of the princely houses was lost to them. The best examples of carpets were sent out of the country, with the result that the workers had no good samples to refer to while producing carpets. The carpet industry was revived by the middle of 19th century by commercial firms who realised that a market in Europe existed for hand-woven carpets. The revival of the industry was carried out by outsiders and not by local patrons of art who would have understood the art traditions of the country. The commercial houses wanted to organise trade and began producing articles according to requirements received from outside. No attempt was made to revive the traditions of carpet industry which had been built up during the Moghul period. Mostly copies of Persian carpets were reproduced in India and often were sold by Commercial houses as Persian carpets. In India they were called Indo-Isphan, Indo-Kirman, but as soon as it left the coast of India the word 'Indo' was dropped.

The Album of Oriental Carpets brought out by Vienna, with excellent reproductions in colour of the old Persian carpet designs, was also responsible for eliminating any differences in style developed by different carpet centres. Most of the centres began reproducing the designs from the plates of the Vienna Album.

The carpet industry in India became imitative. Excellent reproductions were made of Isphan, Kirman, Bokhara, Kazak, Turkmani carpets. The designers became experts in reproducing designs from plates. They, however, lost the ability of creative designing.

Kashmir, however, produced the finest carpets. The influence of the shawl industry on the carpets gave it an individual character of its own. The '*Talim*' which is a distinctive feature of the Kashmir carpet industry was adopted from the Kani shawl weaving. The introduction of shawl patterns in the carpets in Kashmir has created a new style of carpets which is typically Indian. The need in the carpet industry of India is for creative designers, who understand the medium, for revitalising the industry. Research in carpet designs is essential so that India can once again build up a reputation for distinctive designs in its carpet industry.

—JASLEEN DHAMIJA

A copy of the Ardebil, recently produced in Srinagar. Courtesy, All India Handicrafts Board. (Photo by Jasleen Dhamija)

Detail of a Bhutia Saddle Carpet from Kumaon, U.P. Courtesy, All India Handicrafts Board. (Photo by Ram Dhamija)

UTTAR PRADESH

The earliest chronicle which records carpet weaving in U.P. is Abul Fazal's *Ain-i-Akbari*. He mentions weaving of carpets in Allahabad and Jaunpur.

Mirzapur and Bhadhoi:

The beginning of the industry in Mirzapur and Bhadhoi, so the legend goes was started by outsiders during Moghul times and is parallel with the Shah Abbas period in Persia. The story goes that a caravan travelling on the grand trunk route was looted and most of the people killed. One of the persons who escaped the looters, was a weaver of carpets. He was given shelter by a village nearby. He settled down in the village and taught the villagers this craft in gratitude for their having saved his life. Luqman Hakim is even to-day worshipped. Some say he was a Nubian slave, others that he was a Persian carpet weaver. The carpet weavers celebrate the last Wednesday in the month after Moharram as his day.

The village in which he settled down was Ghosia. The craft spread to the nearby village Madho Singh and others. The industry began in a village and has even today retained its cottage character. The majority of the weavers work on the land as well as weave carpets. They are helped by their families. The women do the spinning of the yarn, if the wool is handspun. They also make the balls of wool from hanks and help in the warping operation. The weaving is done by the adults and the children together. Hindus as well as Muslims practice this craft. Amongst the Hindus the agricultural castes such as *Ahirs* and *Kewats* are predominant. Amongst Muslims are the *Kalin-bafs* and *Julahas*. Earlier this area used to be well known for its indigo plantations. The English indigo firms employed a number of people. After the manufacture of chemical blue which quickly took away the market for indigo, the indigo plantations closed down and some of the firms encouraged carpet industry for which the demand was growing in the West by the middle of 19th century. Some of the English carpet companies working today, were originally indigo companies.

Mirzapur Bhadhoi area is today the most important area for carpet weaving as it employs the largest number of persons and the bulk of the export trade is from this area.

Carpet industry is controlled by manufacturers-cum-exporters on one hand and by the loom owners on the other. The manufacturer-cum-exporter supplies the designs and raw material to the loom owner who fix the looms, engages weavers and also deliver the woven carpet. The payment is made on the basis of a contract entered with the loom owner. The finishing of the carpet, however,

is always done in the factory or premises of the manufacturer-cum-exporter. The loom weaver bears the cost of transporting raw material and carpets, as well as is responsible for supervision of the work.

There is another class of middlemen known as *Guchi-walas*. They use their own raw material for weaving carpets, according to the agreed rates. The carpets are then finished by them and sold to the exporters.

There is another system known as the *bazar* system where the middle man produces the carpets at his own risk, finishes them and tries to sell them through his own efforts to the exporter or local sellers.

The worker remains a wage earner and very rarely enters directly into any contract with exporter. There was only one cooperative society in Bhadhoi in 1960 and that too did not function very well.

The industry is spread over nearly five hundred villages around about Bhadhoi, Mirzapur, Khamaria and Gopi gunj etc.

According to a survey conducted by the All India Handicrafts Board in 1960 there are approximately fifty thousand weavers in U.P. and twenty thousand others employed in the ancillaries to the carpet industry.

Manufacturing Processes:

The wool is received in its raw state and is first sorted out according to the colours white, grey, fawn etc. This work is generally done by the men and women in their spare time. After this carding is done by the help of carding machines, spinning is then done by women and children.

The spinning of yarn is very poorly paid as it is mostly done by women. After this the spun yarn is collected and converted into '*Batias*' or '*hanks*' within the premises of the manufacturer or yarn merchant and is ready for dyeing.

Previously dyeing of wool was with the use of vegetable colours but now with the use of chemical dyes there is not a single dyer who is knowledgeable about vegetable dyeing.

The method of dyeing followed all over the area is generally the open pot dyeing method. This is rather a crude method as neither the heat can be controlled nor the yarn turned, to ensure uniformity in the absorption of colours.

A few of the larger manufacturers have introduced open dye vat method which is an improvement to the other. Small boilers have been installed for generating steam. The vats are of wood and are rectangular in shape. Heating is done by steam jets which are controlled.

Most of the dyeing is in acid colours. Some of the leading manufacturers use chrome dyes so as to produce shades fast to chemical wash. Cotton yarn used for backing in superior quality carpet is also dyed to match the ground shade of carpets.

The weaving procedure:

The carpets are woven on vertical pit looms of varying sizes ranging from five feet to about sixty feet. Generally three to five weavers work on a loom depending upon the size of the carpet, they are mostly young boys working as apprentices under the guidance of the master weavers.

The warp is prepared out of twisted cotton for finer weaves and sometimes out of jute twine for the rougher qualities. For the Bokharas even a woollen warp is prepared.

The design to be woven is generally prepared by the designer from photograph or a plate received from the manufacturer. Most of the manufacturers are making items to order and as the bulk of the production is exported outside the country's design, quality and colours are dictated by fashion trends abroad. The designers work out the patterns on the basis of instructions received. The design is prepared on a graph paper, which is specially prepared for this type of work, as the number of squares in an inch vary according to the number of stitches in an inch. The job of the designer is an extremely skillful one, as he has to work out the entire design on the graph paper, colour it and make a colour chart on the basis of which the wool to be used in the carpet is dyed. The weaver ties the ball of thread on the top of the loom with the help of a string and the threads hang easily in the reach of the weavers. With the *churi* (knife) in one hand, he twists the thread into two warp threads for single weaving and makes the *Senha* knot. Double knotting has now become very common and is known as *doutapki*. The weft thread which is thrown across is white cotton and is thrown twice and then the carpet is beaten down by the *punja* the metal comb like instrument having a wooden handle. This is a very heavy instrument and can knock in enormous weights of weft. The *thari* is really stout here and can take a lot of wear.

The carpet industry around Mirzapur, Bhadhoi, produces carpets as per demand of the buyers. They are equipped to produce any type of carpet of the medium quality. The knotting of the carpet is generally upto sixty knots or so per square inch. They have introduced into the production the French Abusson and Savonnerie designs, and the Chinese sculptured carpets. This type of weaving does not require very many number of knots per square inch is suited to the production of the sculptured carpets of the French and Chinese designs. Oriental designs are also prepared. Though they have a very limited production. The delicate curvilinear patterns demand a much finer weave.

Today there is growing demand for the finer quality oriental carpets and a number of manufacturers are taking it up. There is a great deal of competition and each manufacturer tries to keep an eye on what the other is doing. Under selling and undercutting is quite often resorted to and quality is sacrificed. Major part of the production is directly exported and the designs are not even seen in the country.

AGRA

AGRA must have been weaving carpets during the Moghul times. Lahore factory we know was established by Akbar, we can therefore assume that weaving in Agra may have begun during that period also. As was the case of the industry throughout Northern India, with fall of the Moghul Empire the industry met with a severe setback. A few *Kalin-bafs* continued to practice this craft supplying the requirements of the smaller *zamindars* etc. The industry was, however, reorganised by the second quarter of 19th century with the idea of exporting carpets out of the country by a German firm Weyland and Co. In 1921 the company was bought over by East India Carpet Company.

Two of the oldest firms still continue the trade. The Kailash Carpet Co. and The East India Carpet Co. The bulk of the weavers in the carpet industry were *Muslims* and migrated from Agra to Pakistan in large numbers. Only a few people have been left behind, and the quantity produced is nothing like what it used to be in 1928 when some three thousand weavers worked full time. However the quality is still there, specially in firmness of structure and excellence of workmanship. In this town the best work has been done in the medium-fine grades.

An unusual feature of the Agra weaving technique is the calling out of the design or *phera bolna*. The master weaver alone sees the design and calls out to each weaver in turn, in a language of his own, where light blue is *mithi*, dark blue is *gahri*, medium blue is *surmai*, after what colour is to be put on each knot. This appears to be quite complex, but in fact it is relatively simple, because it depends on what may be called 'continuation of colour' in a design. A colour that has been used in a knot in one row, can, in the next row, either be used in the knot on top of it, or in the knot on the right of that, or in the knot on the left of that, or it can cease to be used and another colour commenced. These directions are required only for the outlines of the motifs, and are quite efficiently communicated and understood.

The designs used by the Agra industry are of all sorts, including Persian, Bokhara, French and Chinese. The market for these carpets is principally in the United States of America. The carpet industry here is a whole-time business. The system of cottage craft was not found here earlier with the result that the industry produced a finer variety of carpets than that being produced in Mirzapur, Bhadhoi. The industry is at present producing three types of carpets. Persian, Turkoman and French. In the Persian they are the Isfahan, Kashan, the Mouri are the only Turkoman carpets produced. The bulk of the production is of the Abusson and Savonnerie. Wine red and cream are the popular background for the French carpets.

SHAHJAHANPUR

The carpet weaving industry was started by Hussain Khan, a dacoit who was imprisoned in Shahjahanpur. In the jail he learnt the technique of cotton carpet weaving and after his release he settled down in the town and practiced the craft to earn his livelihood.

Today there are nearly five hundred families engaged in the industry. Each family has on an average two looms and four to five family members work on the carpet. Approximately two thousand to two thousand five hundred people are working on one thousand looms in Shahjahanpur.

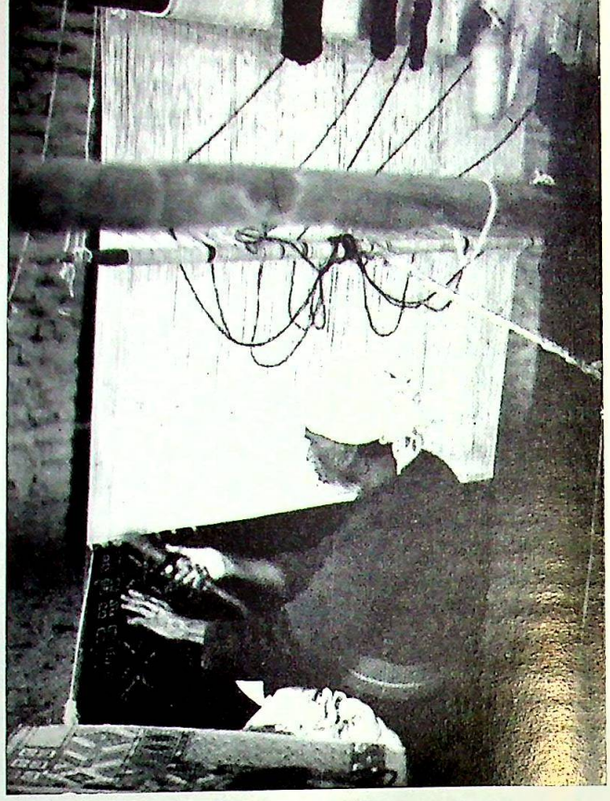
The industry is run on the basis already described for Mirzapur area. The weaver works in his cottage. The raw material is supplied to him and the finished goods taken back, fifty seven establishments of dealers control the entire industry.

There are two co-operative societies which are working at present. Both having a membership of forty five persons. The Kaleen Bunkar Udyog Sahakari Samiti, Sadar Bazar, Shahjahanpur has so far received Rs. 500/- as working capital loan, from the Industries Department for its 25 workers. This is in-adequate and cannot meet the requirement of even half a dozen weavers. The

1. *One of the oldest carpet weavers of Agra is busy beating down the weft thread of a fine quality Bokhara being produced in the Kailash Carpet Factory, Agra. (Photo—Ram Dhamija.)*

2. *Mirzapur and Bhadhoi area has specialised in the production of Abbusson and Savonnerie carpets which are very popular export items. The heavy pile of the carpet and the sculpting of the outlines as well as the shading of the designs, so as to give the impression of depth is a speciality of these carpets. This is an excellent specimen of the Savonnerie design. (Photo—Jasleen Dhamija.)*

3. *Detail of the Savonnerie carpet where no outline has been woven into the design. The outline is given by clipping. (Photo—Jasleen Dhamija.)*



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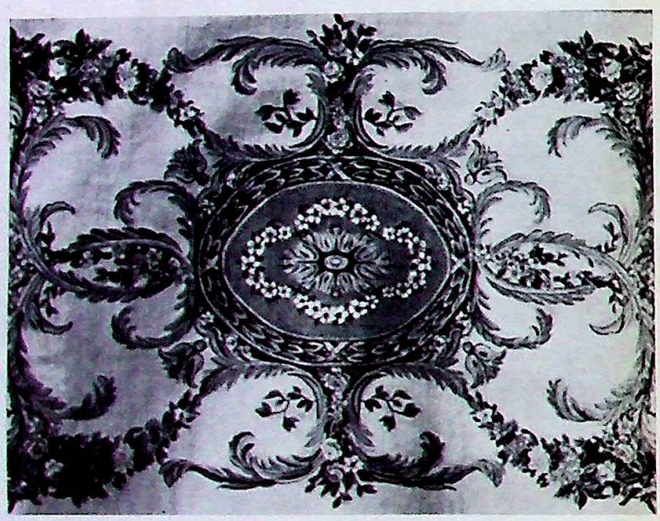

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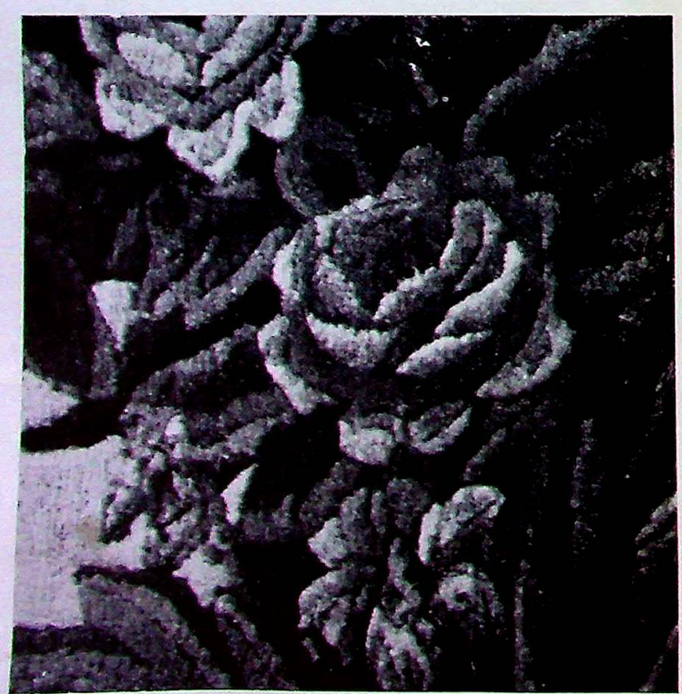

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second society Kaleen Bunkar Udyog Shahkari Samiti, Mohalla Tarin Bahadurganj, Shahjahanpur was registered in December, 1964 having 20 members and Rs. 250/- as share capital. The State Industries Department has sanctioned a working capital loan of Rs. 1,200/-. The amount has not been released so far.

The amounts sanctioned as loan are inadequate and it is not possible for the societies to function effectively.

The quality of carpets is quite rough. 5x5 or 6x6 knots per inch is woven in the better quality of carpets. There are sometimes six knots per inch also in some of the varieties. The wool is rough local hand-spun. The designs which are traditionally woven are simple but attractive and suited to the type of wool being used and the weave.

In the designs *Kethariwala Jal* is very attractive with its simple geo-metrical patterns and colour combination of maroon background with black outlines. In places the natural cream colour is used with an effective restraint. The local names of the designs are *Chowrangia, Kethariwala Jal, Takhdar* and *Jainamaz*. The weavers know the designs by heart and a graph is not required. The simple patterns and the cheapness of the carpets has made the Shahjahanpur carpet popular and there is no difficulty in marketing the total production. Attempts at introducing new designs has so far been a failure. At present the annual production is 5,00,000 sq. ft. which is valued at Rs. 10,00,000.

In U.P. all the carpet manufacturing areas, except the Kumaon hill carpets, are covered by the Quality Control Scheme. Here certain minimum specification have been laid down. The quality of the carpet is checked according to the claim made by the manufacturers and quality marking seal is affixed to the label.

For encouraging the export of carpets the Government has offered 45 per cent incentive to the exporters. 40% for import of woollen tops and 5% for the import of dyes.

—J. D.

PUNJAB

Akbar the Great set up the first carpet factory in India under court patronage in Lahore. Abul Fazal in *Ain-i-Akbari* gives us a very clear picture of the work-shops where Persian weavers were kept busy and the excellent terms offered to them, so as to keep them happy and settled in their adopted country.

It has been conclusively proved that the best known datable carpets such as Jaipur collection, Fremlin and the Girdlers Carpet were manufactured during the later half of the 17th century in Lahore. The Carpet weaving centre continued to flourish in Lahore until the end of 18th century. By the middle of 19th centuary Amritsar developed into a centre for production.

The factors responsible for this were varied. After 1809 Maharaja Ranjit Singh placed greater emphasis in Amritsar. Court patronage was therefore shifted. The campaign against Kashmir and its annexation by Maharaja Ranjit Singh and the bringing of artisans and their settling in Amritsar who were expert shawl weavers and carpet weavers gave a greater impetus to the industry. A number of *Kani* shawl weavers from Kashmir migrated to Amritsar because of acute famine conditions in the State for many years and also due to heavy taxation on the looms by the Kashmir Government. Later when the demand for the shawls decreased, as was the case in Kashmir, many of the shawl weavers took to carpet weaving.

The oldest Indian firm was started at Amritsar in 1860 by Lala Johar Dass under the name Devi Sahai Chamba Mal. Today Arora Carpet company continues the firm which had closed down for a short period, due to family disputes, has been restarted with a change in name. Some of the finest Mouri or Mauri carpets are being produced by them.

The original home of the Mouri carpet is Merv, in Central Asia which came to be woven in Amritsar and known as a Mouri Carpet. In a Mouri carpet the geometrical patterns of *Chakli* are woven with a cotton warp and weft, with the knotting in worsted yarn. Indo-Kashan and Indo-Abbas carpets are also being produced. The Amritsar, Mouri however is the most successful. Deep red, golden yellow,

Kathai or liver red and white are the basic backgrounds for the Mouris. The colours are the best matched for the deep red did not have a bluish tinge. The green used in the carpets was the right olive or *mehndi* colour. The only flaw in the opinion of a true lover of pile carpets is that the carpets are given far too much of a sheen through chemical wash with the result that the surface shines like velvet. This type of finish is of course preferred by many of the buyers also.

The carpets are generally woven with the double knot, i.e. the two pairs of threads of the warp round which the thread is twisted and one of which lies in the front and another at the back in the single knotting process, are now adjacent and parallel, with the result that the knots appear at the back to be twice in number to those actually tied. Only a single cotton weft is thrown. The carpet structure therefore lacks the stiffness that is characteristic of a carpet prepared with single knotting. The carpet does not lie well on the ground and has a tendency to crinkle and slip.

The typical Mouris are known to the old weavers by heart, for the other designs they still use the *talim*, except for the East India Carpet Co. which has introduced the graph system. It is interesting that outside of Srinagar, Amritsar is the only place where *talim* is used. This shows the close links of the carpet industry of Amritsar with Kashmir. The *talim* used in Amritsar is slightly different in character to the *talim* developed in Kashmir. The Kashmir *talim* is divided into units depending upon the quality of the carpet, this is indicated by the drawing of an *alaf* at the beginning and at the end. This makes it easier for the designer and for the weaver to check any mistake in the *talim*. In Amritsar this division does not exist, it is a continuous *talim* similar in fact to the *talim* of the *Kani* shawl weavers, from which this use of *talim* must have been taken.

The weave, however, is fine and the colour matchings perfect. Two other firms Puri carpet House, Hal Bazar, Amritsar and Asian Carpet manufacturers, Chowk Pargdas, Mohan Singh Road, Amritsar are also producing Mouris. The Mouris are being sold strangely enough in Srinagar, Delhi and Bombay as Kashmir Carpets.

The East India carpet Co. which has its head quarters in Amritsar is one of the best organised large manufacturers of carpets. The manufacturing is organised on scientific lines with strict supervision from the dyeing of the yarn, designing, weaving, finishing and the final checking before the goods are packed and despatched.

Originally T. C. Mullar, an Austrian, had organised a carpet factory in Amritsar before the first world war. Stavridies who had set up a factory in Gwalior joined with Mr. Mullar in 1920 and the factory was known as Stavridies and Co.

Later on in 1922 the East India Carpet Co. bought over a number of companies. Stavridies, Veyland Co., Mitchell and Co. and an amalgam was formed of all these companies having factories in Gwalior, Jaipur, Agra, Mirzapur, Amritsar and Kashmir. Oriental Carpet Manufacturers, London, which was one of the largest wholesale dealers of carpets had already established production units in Turkey. Persia sent out a representative G. F. A. Stevens to investigate the Indian production units. By 1924 OCM had bought over the company and it had complete financial control though it

retained its seperate identity as The East India Carpet Company Ltd.

During that period approximately one hundred twenty looms were working in Amritsar of the East India Carpet Co. Ltd. alone. Five hundred weavers were being given full time employment, nearly fifty percent of the weavers were Kashmiris who had migrated to Amritsar quite some time ago.

Every locality in Amritsar had a workshop. Nearly six workshops were distributed all over the city. The spinning mill earlier established by East India Carpet Co. was expanded in 1924 to meet the demands of the growing industry. They expanded their activity further by covering Batala, Sujanpur, Dinanagar, Fatehgarh etc. The partition of the country resulted in the complete stoppage of work. Most of the skilled weavers, being Muslims, migrated to Pakistan and the industry was left without a single expert weaver.

In recent years progress has been made in re-establishing the industry. New weavers have been trained up. Some weavers have also been brought from U. P. and settled in Punjab.

In a survey carried out in 1960 by all India Handicrafts Board the number of looms shown in the whole of Amritsar were thirtyfive working and eight idle. Today East India Carpet Co. alone has sixty looms of which fifty are working giving employment to about one hundred and sixty weavers. Arora Brothers also has thirtyfive looms functioning, and the industry is looking forward to increasing its production.

An interesting experiment has been started by East India Carpet Co. by training women labour for the carpet industry. In India this craft has given employment to men and boys only. Women helped in spinning, unwinding of yarn and preparation of the warp. Today they are being taught to set up the loom and do the knotting also, this practice is common in Persia. Though this step met with a great deal of resistance in the beginning, now a number of women workers have joined and are being trained to take up all the operations of the carpet weaving. This step will have repercussions all over the industry. If other manufacturers learn from this experience and initiate training amongst young girls and women they will be able to expand their production and keep the cost of the carpet low.

East India Carpet Co. has also employed a few Tibetan refugees for carpet weaving in their centre. Though they follow the traditional technique of looping as described in the article on Himalayan carpets, the choice of colours, use of good quality yarn and judicious sculpting of the carpet has produced excellent results.

The East India Carpet Co. at Amritsar has been able to secure orders from well known French interior decorators. Carpets of Savonnerie designs are being specially produced for interiors done in styles of particular periods. Their design section, with Miss Surjit Bedi at its head, has been successful in interpreting the demands of the industry. An interesting carpet in shades of blue and white has recently been produced from a design by Picasso. One side of the carpet has a profile of a woman with large introspective eyes looking out at the world. These eyes have been the cause of amused ribaldry amongst the weavers.

PANIPAT

Panipat has only recently taken to the production of carpets. Only two firms are at present producing carpets in Panipat. One firm was started in 1941 and another firm started working only after the partition. They are mostly producing plain carpets in different colours as well a few patterned carpets. Mostly local orders are supplied by them.

PALANPUR

An effort has been made by the Punjab State Industries Department to introduce carpet weaving in the hill areas of Kangra, the idea being that as the raw material is available in plenty and employment is needed by the local people, Carpet Industry would perhaps be able to fulfil this requirement.

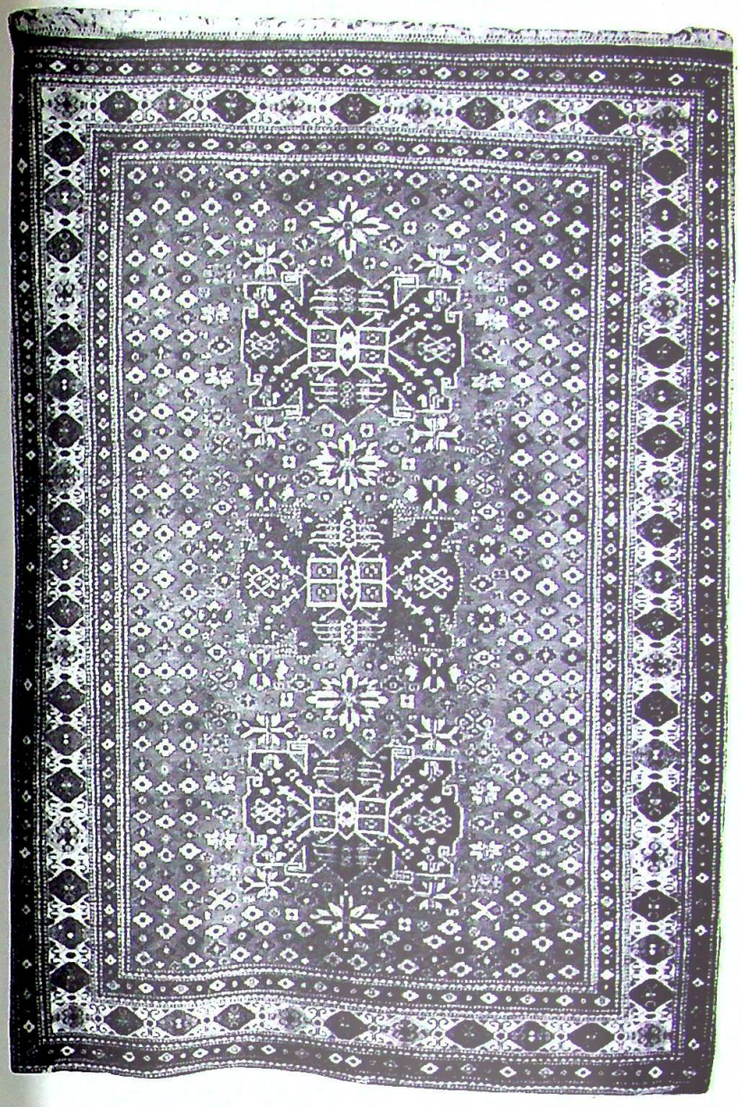
In June, 1957 a Training Centre with 15 trainees for carpet was opened by the Punjab Government. The duration of the training was two years. Two expert carpet weavers who come from a family of traditional carpet weaver of Kashmir were employed for training the people. Nearly a hundred people have been trained so far. Most of the ex-trainees were men and a number of them joined the army during the emergency in 1962. A few girls who have been trained were also not able to continue with the craft as after marriage they left the area.

In 1963 the Training Centre was converted into Training-cum-Production Centre. Efforts were also made to organise the trainees into a co-operative society. Three co-operative societies were organised and registered. The societies, however, did not function well and were liquidated.

At present there are twenty eight trainees in the Training Section and workers in the Production Section and only four looms are working in Palanpur. The average monthly production is four to five carpets per month. Whereas the trainees are getting stipend of Rupees thirty per month, the workers are being paid thirty to thirty three P. per thousand knots. On an average, a worker after working eight hours earns Rs. 1.75 P. to Rs. 2/- per day. An attempt is now being made to train up the young married girls of the area in carpet weaving and an undertaking is being taken from them that in case they do not continue with the craft after the training period or training is not completed the cost incurred on them would have to be remitted to Government. With the introduction of this system for those, who are settled in the area, it may be possible to organise production in the area.

The average quality carpets being woven are 8 by 8 knots and 12 by 12 knots per inch. As the instructors are from Kashmir, the influence of Kashmir is predominating. The system of *talim* is used in the centre. The designs are also of Kashmir. An attempt has recently been made to introduce traditional motifs of the area.

—J. D.



1. *The Mouri carpet is a typical product of Amritsar. The background is generally a dark red but is also produced in white with the pattern worked in black and red. The Amritsar carpets are of a fine quality and show a strong influence of Kashmir.* (*Photo by Jasleen Dhamija.*)

2. *Geometrical patterns similar to the Mouri are generally produced in Amritsar. Double knotting and single weft is common. The carpet is of a fine quality but the back does not have the stiffness associated with the carpet.* (*Photo by Jasleen Dhamija.*)

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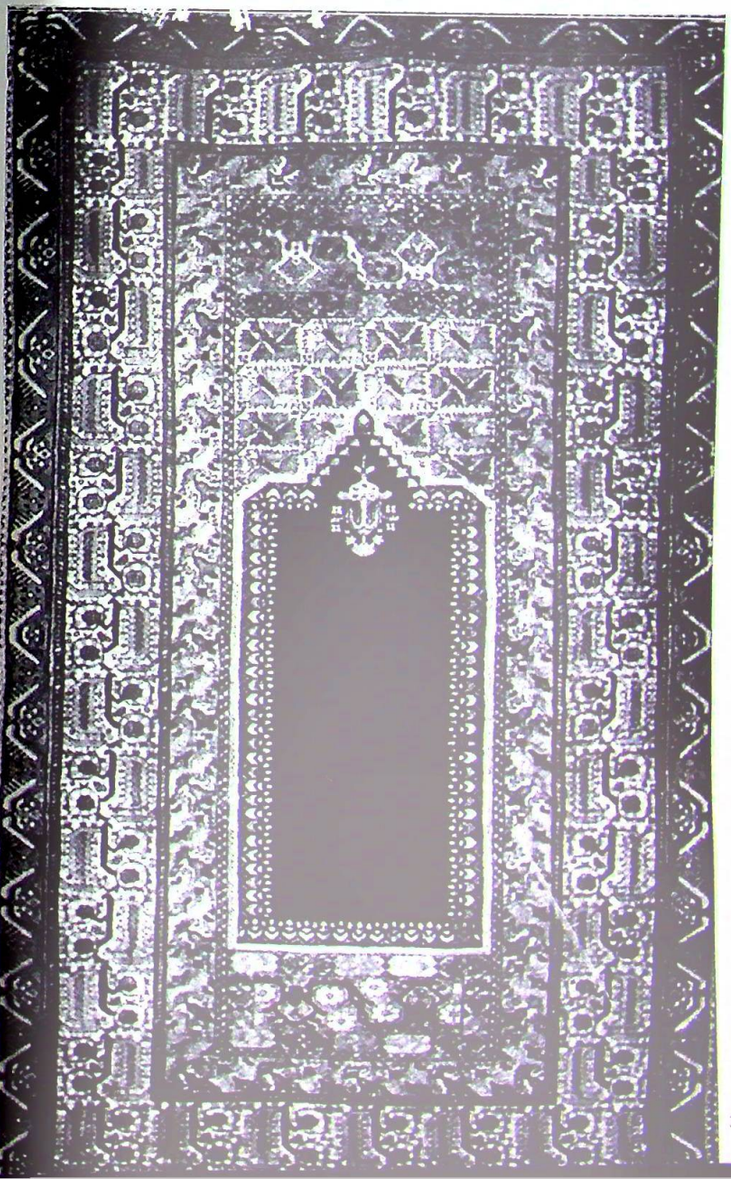

3. *A prayer carpet woven in the East India Carpet Company's factory, Amritsar.* (*Photo by Jasleen Dhamija.*)

A carpet woven on the design of Pablo Picasso in the East India Carpet Company's factory, Amritsar. The original drawings were received from France and the designers have interpreted them into the graph which is Copied. It was learnt that the carpet is being praduced for a special firm of interior decorators.

(Photo — Jasleen Dhamija.)

SOUTH INDIA

It is quite likely that Masulipatam, on the eastern coast of South India, which is well known to the student of history of textile as Coromandel, was the earliest carpet centre in India. Historical proof exists that the industry was started by four families of Persian carpet weavers who had settled in Masulipatam before 1550 A.D.

The first mention of carpet manufacturing in the area is found in the diary of a factor of the East India Company Mr. Streynsham, when he visited the area in 1679. He wrote "this Elloor is reckoned one of the greatest Townes in the country.....where are made the best carpets after the manner of those in Persia by a race of Persians.....which they told me came over 100 years ago" (extracts from Monograph on the carpet weaving industry of Southern India by Henry T. Harris 1908).

The industry was flourishing in 1679 and within the memory of the local inhabitants had been established at Elluru a hundred years before, approximately by 1550 or so. According to the local weavers in Elluru four families of Persian carpet weavers are supposed to have settled down in Masulipatam which was a prosperous busy port. They trained a number of weavers in carpet weaving. Masulipatam was a meeting ground of Chinese, Arabs, Persians, Indians, English, Dutch and Portuguese and a centre of trade for the Far East or the Spice Islands. The traders had learnt that the spices could be more easily exchanged with Indian cottons, rather than with money. Silver and gold of different areas changed hands in Masulipatam. It is quite likely that this town which is supposed to have been started by a settlement of Arabs in 600 A.D. and which had a number of Muslims to build up a mosque for their worship in 14th century A.D. would have also had a large number of customers for carpets.

The belief amongst the direct descendants of one of the Persian families, which is still continuing the family business under the name Yusuf and Brothers, is that their forefathers came to Masulipatam 600 years ago. Later three families out of the four migrated to Elluru. The time or period of their shifting is not known. These families were Aiya, Dawood, and Miyan. The reason for shifting the carpet industry to Elluru, according to the family, was that this area abounded in a flowering shrub known as Tangellamuddy, from which the yellow colour used in dyeing of wool was extracted. The locality where the carpet weavers settled down, is even today known as Tangellamuddy.

Mr. John Irwin in his article on Indian Textile trade in 17th century (Journal of Indian Textile, Vol II) mentions that in a letter dated 1681 the London Director of the East

India Company reference to the report of Streynsham on Elluru is made and an order for hundred carpets was placed. Whether these carpets were supplied and trade contacts established, is not known.

In 1908 an account of the industry is given in the Monograph on the Carpet Industry of South India by Henry T. Harris. He mentions that even though it had not been a very large industry yet it has a number of idle looms. He also mentions that the industry is continuing only because M/S Arbuthnot and Co. and M/S Wilson and Co. have financed the weavers and shipped the products to England.

Today there are six important private manufacturers who control the entire industry. They are Sheikh Imam Saheb and Sons. Ismail Razack and Sons. Moody Stores Mohammed Yusuf and Sons. Suleman and Sons. Abdul Rahim and Co.

The total production of the private manufacturers which comes to 6 to 7 lacs of rupees is exported to U. K. The only design being prepared by the carpet weavers today is the *Hasham Khani* on a cream coloured background. The *Hasham Khani* has a flower pattern similar to the palmette with curvilinear leaves on either side. The design and the execution, is quite crude. The quality being produced is known as standard quality and is hardly $4 \times 4\frac{1}{2}$ stiches per square inch. Thick jute thread is thrown thrice in the weft. The wool used is dead wool which is handspun. The weave is so loose that if the wool is pulled, handfulls of fibre come out. The price also at which they are asked to supply is ridiculously low—Rs. 16 per sq. yard.

The weavers are capable of producing a number of designs besides *Hasham Khani*. They have been traditionally producing *Ramachandra Khani*, *Bhashim Khani*, *Noorjehan Khani*, *Gulab Khani*, *Mulk Shah Niwaz Khani*, *Farasi Khani*, *Gopalrao Khani*, *Robert Khani*. These are also not woven in very fine quality but generally in 6 x 6 knots per sq. inch.

The names of many of the carpet designs are associated with names of persons who may have helped the carpet weavers. Gopalrao for instance was a local *zamindar* who used to place orders for carpets. Robert Khani is after the first name of a popular English Collector of the area. Recently a new design Reddy Khani has been introduced. When the Co-operative society was inaugurated in 1937 by a congress leader, Reddy, the society prepared a special design and named it after him.

Elluru Pile Carpet Weavers Co-operative Purchase and Sales Society was formed in 1937 with a membership of two hundred members of which one hundred and eighty three were weavers. The society unfortunately has not been working very well. Today only 35 craftsmen are working with the society and a special manager has been appointed by the Co-operative Department to manage the society. The remaining six hundred and fifteen to six hundred and thirty workers work for the private manufacturers. It is estimated that the total number of persons employed in the carpet industry in Elluru are one thousand five hundred and the number of looms working at present are two hundred and twenty to two hundred and forty.

The society, however, is the only manufacturing unit which is producing the traditional designs and better quality carpets.

It appears a sheer waste of labour to produce such low quality carpets by hand and compete with machine made carpets. If the manufacturers could be helped to get better quality wool from Bikaner, a carding machine, a spinning unit at Elluru, and a designs unit for supplying improved designs, better quality carpets could be produced from which the industry would be able to earn and survive. At present the exporters are selling goods lower than their cost because of the incentive being given on export of goods.

WARANGAL

Warangal has been the centre for the wool trade of the area. Elluru even now gets its wool from Warangal. It is quite likely that some weavers from Elluru might have settled in Warangal and started carpet weaving there.

The weavers, however, say that the industry was established during the Moghul Empire, how and when has still not been traced. The first references to the Warangal carpets appear in 1885, when the fine silken carpets of Warangal were exhibited as Deccani Carpets and received a first prize for their excellence in weave and design. It was perhaps at this exhibition that the interest of the commercial houses was aroused and production was organised through private loom-owners of the area. From descriptions appearing in catalogues etc., it appears as though the designs were of Persian origin but with a strong local character. The curvilenear patterns were dispensed with and bold patterns with strong colour combinations were worked out. The carpets woven were in wool as well as in silk.

The Nizam of Hyderabad set up a factory for carpet manufacture with the help of East India Carpet Co. Mr. Stavradies was invited by the Nizam to visit Hyderabad State and he was taken to study the carpet industry in Warangal. The factory was set up approximately in 1925 on the understanding that the goods would be taken over by East India Carpet Co. for marketing. A master designer was deputed from Gwalior and the design taken up for production were according to the requirements given by East India Carpet Company.

From 1860 to the first quarter or so of the present century, there were nearly five hundred weavers who worked either for export or produced carpets for the local nawabs and princely houses. The Nizam's factory also employed a number of weavers. After running the factory for ten years the Nizam sold the factory to a local nawab family who was unable to run it and it was subsequently closed. A few carpets available in the Salarjung Museum which must have been woven in the first half of the present century are clearly labelled as local carpets. In fact a very interesting pattern of *mehndi* leaf and flowers is mentioned to have been woven on the court looms. The quality of the carpet is rough. They are all 6 x 6 knots that is 36 knots per inch.

A Hyderabad carpet in the collection of H. H. Jaipur which is now in the Central Museum Jaipur, was presented by the Nizam. It has an interesting pinkish red background with interlacing design of green leaves and yellow flowers. The quality is the same of 36 knots per inch. Col. T. H. Hendley has mentioned the carpet in the catalogue printed

in 1885 where he does not mention the place and date of manufacture or date of presentation. It is, however, quite likely that the carpet was sent for the Industrial Exhibition held in Jaipur in 1883 and which may have been a present to Maharaja Sawai Madho Singhji. From this we can gather that even in the last half of the 19th century the carpets being produced were not of a very fine quality.

Today the carpet weaving industry in Warangal is in the most depressed circumstances. There are not more than 28 to 30 looms in the city which used to have a large working community of Kalinbafs. The private dealers who marketed the products of the weavers have also closed down.

Cottage and Small Scale Industries Co-operative Society, Warangal began functioning in 1952. Today the society is the only agency which produces better quality of carpets and markets the goods outside the town. The society is dependent on the Government Cottage Industries Emporium for the sale of their products and does not have any other source through which the goods can be marketed.

There are even today nearly a dozen weavers who are working in their homes. A pit-loom in the house, with the forking trunk of trees as the vertical beams form the loom of the weavers. The lowest quality wool, spun by the women of the house is used for the pile. They make the cheapest 7 ft x 4 ft pile carpets which has hardly 6 to 8 knots per square inch. This they hawk in the market at Rs. 20/- and if no buyer is available they are even willing to dispose it off at Rs. 15/-. The designs are the simple *Hashim Khani*, *Delhi Khani* which they know by heart. Earlier inexpensive carpets were made by the local weavers with the use of natural wool colours. They had a charm of their own. These designs are once again being revived.

The Co-operative Society at Warangal has a model workshop with 9 looms. Here they follow the traditional method of weaving. This method has been described by Streynsham in his account of the carpet industry in Elluru in 1679 "the loom is stretched right up and down made of cotton threads and the carpet wrought upon them with the woollen yarn of several colours by young boys of 8 to 12 years old. A man with the pattern of the work drawn up on paper, stands at the back side of the carpet, and directs the boys that work it how much of each colour of yarn should be wrought in and every thread being brought they sheer it with a pair of sizers (scissors). The man who directs sits with the coloured graph before him and calls out the *talim* from the graph paper".

The fact that Warangal follows even today the technique seen and described by the Streynsham in his notes on the industry of Elluru shows the direct influence of the Elluru carpet weaving on the Warangal centre.

Walajapet, Bangalore, Tanjore and Malabar used to have carpet production centres according to the account given by Mr. Harris in his Monograph in South Indian carpets written in 1908 as well as in the Monograph of carpets by F. H. Andrews in the journal of Indian Art 1906. One or two looms may still be working in Walajapet and Bangalore but there is no pile carpet industry in Tanjore and Malabar.

—J.D.

1. *A carpet woven in Warangal in the early 20th century which is now in the collection of Salarjung Museum. Lancelot leaf pattern traditionally used in Persian carpets has been transformed into a flower in the border of the carpet design. The body carries a pattern locally evolved of Mehndi (Henna) leaves and flowers. (Photo by Jasleen Dhamija.)*

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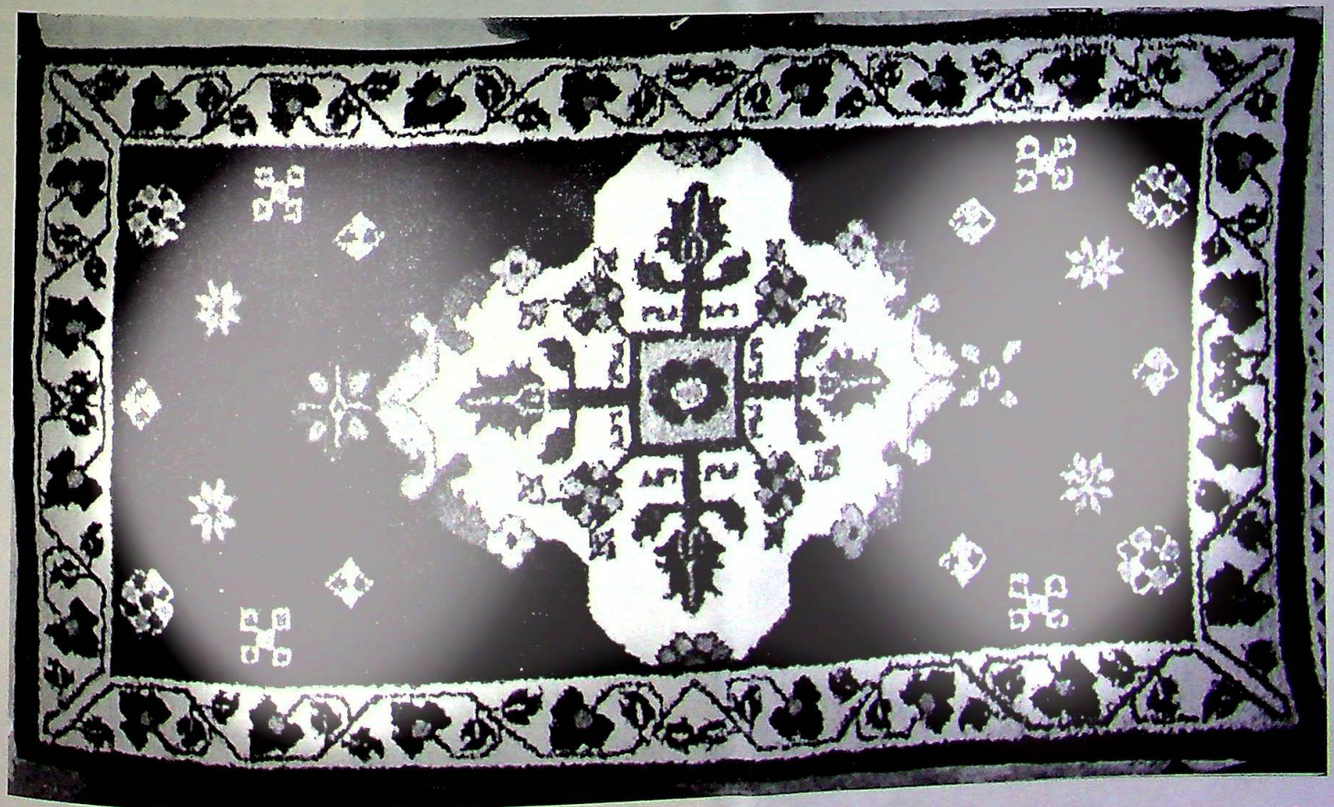
2. *A cottage weaver of Warangal working at his pit-loom.*
(*Photo by Jasleen Dhamija.*)

3. *A typical carpet woven by the cottage weavers at Warangal with the use of natural wool. The design is known as "Dilli Khani." The local name for the border is Anchu. The medallion in the centre is known as 'Kishti' (boat). The four flowers similar to the palmette pattern is locally known as 'Makri' (locust). The four petal flower which is on both sides of the medallion in the centre of the body is the 'Patang' (Kite), the 8 petalled flower near the border on both ends is 'Aath Pagri Ka Phool' (eight turbaned flower) and the curving leaves which define the medallion are known as 'Barg' (the spinal cord.) Though the motifs have been derived from Persian tradition they have been adapted and made their own and even given local names.*

(*Photo by Jasleen Dhamija.*)



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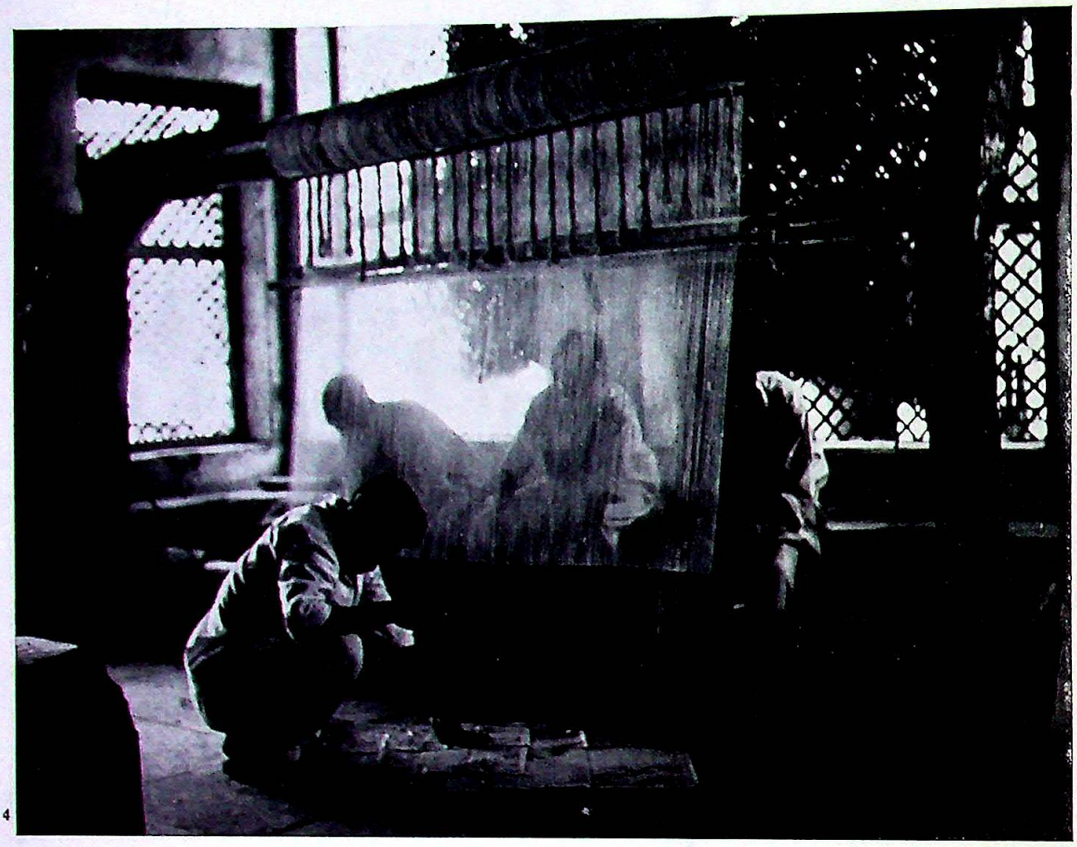
4. At the Model Workshop of the Warangal Co-operative Society, the weavers still follow the traditional method of weaving as described by Mr. Streynsham an East India Company factor who visited an Elluru factory in 1679.

(Photo by Jasleen Dhamija.)



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5. The popular Hashimkhani design which is woven throughout Elluru today for export to U. K., is being trimmed with a long trimming scissors, specially made for this work.

(Photo by Jasleen Dhamija.)

KASHMIR

The Valley of Kashmir with its natural beauty and its skilled craftsmen has always specialised in a number of crafts. Bernier, the French traveller, who visited Kashmir in the 17th century has recorded his appreciation of the skill of Kashmir craftsmen. He mentions that their products were being used in other parts of India. Kashmir had very old contacts with Persia and many of trade route passed through it. The Persian influence on its arts and crafts has always been strong. Kashmir craftsmen however adapted the foreign influence to suit their technique and temperament. For example papier-machie is supposed to have come to Kashmir from Persia, but painting on wood had been practised in Kashmir from earlier times. The influence of Persia was only in the introduction of papier-machie as the base.

John Irwin in his book on Indian Shawls has mentioned that the Kani shawl weaving was perhaps introduced in the 15th century from Persia. He is of the opinion that this technique was originally not known in India. In this, however, one can have reservations. The Kani shawl weaving technique with the use of needles carrying separate colours of threads which are interlocked while being passed through the warp, is an ancient technique and is similar to the Paithani weaving or Daccai work, familiar to a student of Indian textiles. This technique has been practised in India over the ages and it is the similar technique which is used in the shawl industry.

The tradition amongst carpet weavers is that the craft was started by Zain-ul-Abadin (1423-1475) by bringing into Kashmir carpet weavers from Persia and Central Asia. During the invasion of India by Amir Timur in 1398, Sultan Sikander, the father of Zain-ul-Abadin sent his son to pay tribute to the Amir. Timur distrusted the promise of allegiance of Sultan Sikander and took his young son as hostage. The young prince spent seven years at Samarkand.

Timur had collected in his capital the finest artists, craftsmen, writers and philosophers of countries conquered by him and none of them were permitted to cross the Amu Darya or to leave the imperial capital, without special permission of the Amir. During his stay in Samarkand, the prince moved freely in the city and became deeply impressed by the work of the many craftsmen. On his return to Kashmir he brought a few artisans with him and when he ascended the throne he sent emissaries to Perisa, Central Asia and Arabia to persuade the artists and the craftsmen to come to Kashmir and settle in his court, thus laying the foundations of the crafts of Kashmir. Zain-ul-Abadin is always referred to as the Akbar of Kashmir for his enlightened rule of the country.

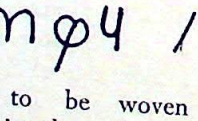
It is possible that carpet weaving for the court and for the personal use of the people may have been practised in Kashmir even earlier, but there is no reference to the industry nor is any early fragment of the Kashmir carpet to be found.

After 15th century, records show that during the Governorship of Ahmed Beg Khan (1615-1618), who was deputed by Jehangir to Kashmir, carpet industry was restarted. Akhun Rahnuma, a Kashmir merchant, on his return from Haj visited Persia, and studied the carpet industry and brought back tools for carpet weaving. On his return he trained up a few people in the art and restarted carpet weaving.

Carpet weaving as an organised industry was, however, developed only in 19th century. An interesting legend associated with Maharaja Ranjit Singh says that after the conquest of Kashmir by Maharaj Ranjit Singh's army, the beauty of Kashmir was narrated to him at his capital in Lahore. Since he was unable to visit Kashmir, a carpet showing the beautiful landscape of Kashmir, its flowers and its trees was woven specially for him. The legend says that he was so thrilled to see the carpet that he is supposed to have rolled on it out of sheer joy.

Until the middle of 19th century Kani shawl weaving was the most important industry of Kashmir. Shawl weaving was a thriving industry with a number of centres spread all over the valley. The entire operation was very well organised and buyers from all over the world came to purchase these shawls. With restrictions under the British control on export of shawls from India, heavy taxation in Kashmir on the shawl looms and on the entry of shawls into Indian territory, as well as the competition faced by the shawl industry from the new centres started at Paisley and Norwich, the demand for Kani shawls fell and a number of weavers were without work. The Kani shawl weavers were diverted to the carpet industry. The close link of the Kani shawl weaving and carpet weaving can be seen in the use of *talim* in both the crafts. The shawl weavers have been traditionally using the *talim*. It is not known as to when the use of *talim* was introduced into carpet weaving, but the fact that the carpet *talim* has been improved upon to suit the medium and is far more scientific than the Kani shawl *talim* shows that this must have been introduced quite some time back.

The production practice of weaving a shawl is that the merchant, supplies the raw materials to the weaver along with a *talim* and a *ranga* ticket, which carries the colours to be used and the symbols used for the colours. The master weaver mounts the warp on the loom and begins to weave, keeping the *talim* before him and calling out the design which is to be woven in by his apprentices. This method is also followed in carpet weaving. In carpet weaving they have improved upon the *talim* by dividing the *talim* into a single line, for a complete line of the pile in a carpet. This is further divided into units, in the line depending upon the stitches in an inch. If there are sixteen stitches the unit will be divided to cover that many stitches and will be enclosed in a single straight stroke like the *alaf*.

The *talim* is actually a line of numerals which starts with a circle O standing for one stitch and is continued as  The number of knots to be woven in particular colours are indicated in the *talim* which would read as follows:

Ö the three dots over a single knot stand for black or blue depending on which colour is being used, if both colours are used another symbol would be given which would be also indicated on the '*ranga* ticket'. The black is known as '*phil*'. The other colours are indicated as follows :—

Ǒ Green (*zangari*)

Ö white (*chot*)

Ô pink (*gulabi*)

O̲ yellow (*zard*)

O̲ pomegranate (*anari*) and so on.

The number of stitches can be indicated as follows ⊙ would mean eleven knots in green. Ŏ O would be twenty. The skill of the *talim* writer is in writing a *talim* for a new design from the pattern made in the traditional method, without the use of a graph. In a graph each square stands for one knot and the whole pattern is built up on that basis. In the traditional method the pattern is drawn on a piece of paper after which, according to the fineness of the knotting, a grill is drawn with red ink, enclosing the design into a number of squares. Each square is five knots on the horizontal side and five knots on the vertical bringing the total number of knots to twenty-five in a square. After the squares have been made the designer prepares a *ranga* ticket and indicates the colours with the symbols of the *talim* to be used in the paper design. The *talim* writer now starts writing the symbols for each line of knots. A leaf or a line may just cover a portion of a square, the skill of the *talim* writer comes in, when he has to decide as to when the colour has to be started and where it has to end and how many stitches have to be worked out. After the *talim* is ready it is made available to the master-weaver, with the *ranga* ticket and the design. The master-weaver prepares the warp and fixes it to the loom. The threads to be used are tied with a string above the weavers and hang conveniently within the reach of the weavers. The *talim* is tucked into the warp thread and one weaver who can read the *talim* calls out the different colours in which the knots are to be put in and the weaver who is at the further end calls back '*hau*' at the end of each instruction, which means that he has followed the instructions. The calling goes on in a sing song manner. One man sings out the instruction and another responds and so it goes on. The deft movements of their fingers move steadily on without stopping as they put in the knots. Most of the workers are young apprentices employed by the master-weaver, with whom a manufacturing agency enters into an agreement. The master-weaver is normally paid thirty-three paise per thousand knots, in addition they are paid a bonus on the square footage of a carpet after it has been completed. The payment to the apprentices is made by the master-weaver and is quite meagre.

Kashmir has only a few '*talim*' writers and designers and they really control the activity. Unless a design is prepared and a *talim* written down no new carpet can be woven. The manufacturers find that to get work done from a *talim* writer and a designer they need to be humoured. A *talim* writer can take three months to write the *talim* for a new carpet of seven feet by four feet of an average quality having one hundred and twenty knots per square inch, which does not have a repeat pattern. This would have nearly four lakhs three thousand two hundred number of knots and the *talim* writer would have to write eight hundred and forty lines of *talim* for each line of knots put into the carpet.

The Kashmiri weavers are as a rule whole-time weavers. As such, great skill has developed among them and the carpets woven can stand comparison with the best in the world. The technique developed over the ages has been well preserved, and the carpets woven today are as good as those of the past. The finest carpets frequently go upto five hundred knots per sq. inch. Scarcely is a carpet to be seen which has less than

one hundred and twenty knots per sq. inch. Most carpets are woven in well organised factories or work rooms, under the eye of master craftsmen. The designs are generally of the Persian, Turkish or Bokhara type. The warp and weft are cotton (except for a few Bokharas) and the pile is of a good grade of wool, either local Kashmir/Ladakh or imported Crossbred. A few carpets are woven with a silk pile, but these are rarities. The colours are generally fast and all the carpets are washed before sale. The pile is clipped extremely smooth. The back is generally of the Jaipur type. Every conceivable carpet size is woven, though the high quality and consequent sale price induces most weavers to concentrate upon small sizes such as 3'x6', 4'x6', 4'x7', 5'x7', 6'x9' etc. Sizes like 9'x12', 10'x14' and 12'x15' are less common, and very large sizes are only made to order.

Indian carpets came to be known outside India when they were exhibited in Exhibitions abroad. One of the finest carpets produced in Kashmir having seven hundred knots per square inch and a silk warp was for Maharajah Gulab Singh. This carpet was exhibited in a London Exhibition held in 1851. After this Kashmir carpets were exhibited at Chicago Exhibition 1893, at Paris Exhibition in 1900 where it won the Grand Prix, London Exhibition 1906.

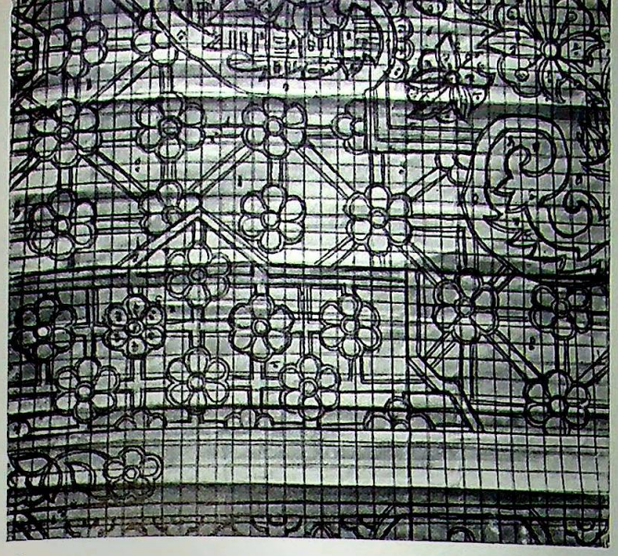
It was at these exhibitions that the attention of commercial houses was drawn to the possibility of producing carpets for foreign markets. Chapman was the first person to attempt the organisation of carpet production in 1876. He worked for two years trying to introduce new designs and standardize the weaving for an export market. He was unsuccessful in his attempt. Immediately after him a representative of Bon Marche of France, a Monsieur Bijex or Bijou, came to Kashmir and attempted to organise the industry. He was also not successful.

Danvergne, who was already engaged in the export of shawls from Kashmir, started a small factory for carpet weaving at Dilawar Khan in Srinagar and was successful in producing carpets for export. This factory was later bought over by a firm Mitchell and Co. After the establishment of this company a number of people started carpet factories and it was soon built up as a flourishing industry.

In a Survey conducted by All India Handicrafts Board in 1960, they found that one thousand five hundred weavers were employed. In addition to this three hundred and fifty five workers are employed in the ancillaries. These workers were employed in the sixteen establishments functioning there. Since then there has been an appreciable increase in the number of weavers and a number of new establishments have also come up.

Carpets are generally bought by visitors to the valley. It appears to have become a must with the visitors to carry back a good Kashmir carpet with them. The Government Emporium and reputed private firms provide the pick of the carpets. Fine quality of Princess Bokhara, Pardha Saruk, Ardebil, Sehra Band, Kirman, Shah Abbas and the Shawl patterns are ready for buying. Using the finest quality of lustrous wool, fast dyes and fine weaves, the carpets can compare with the very best of the Persian products.

—J. D.



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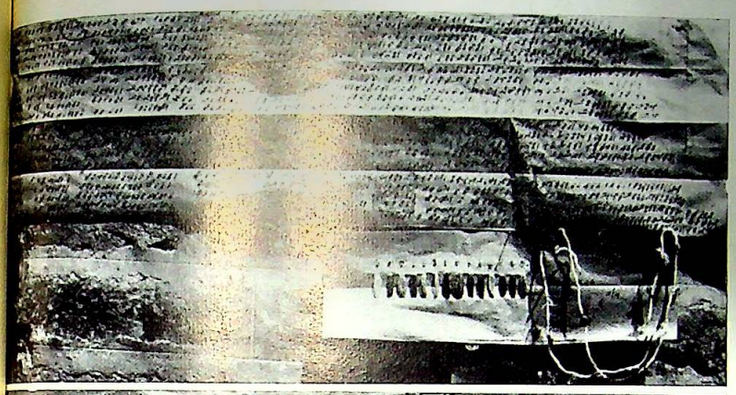

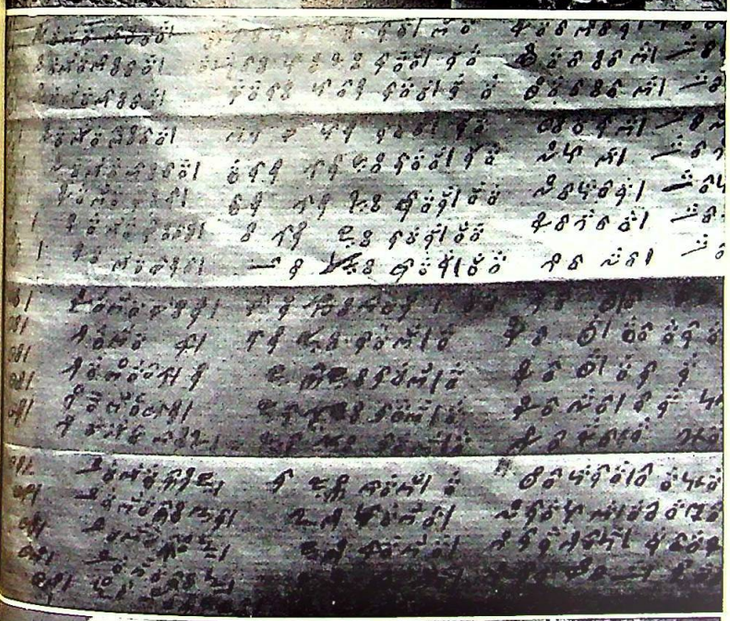

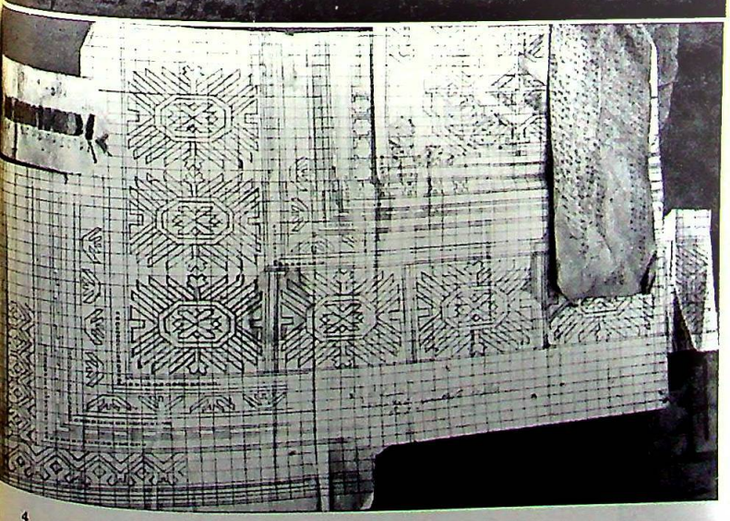

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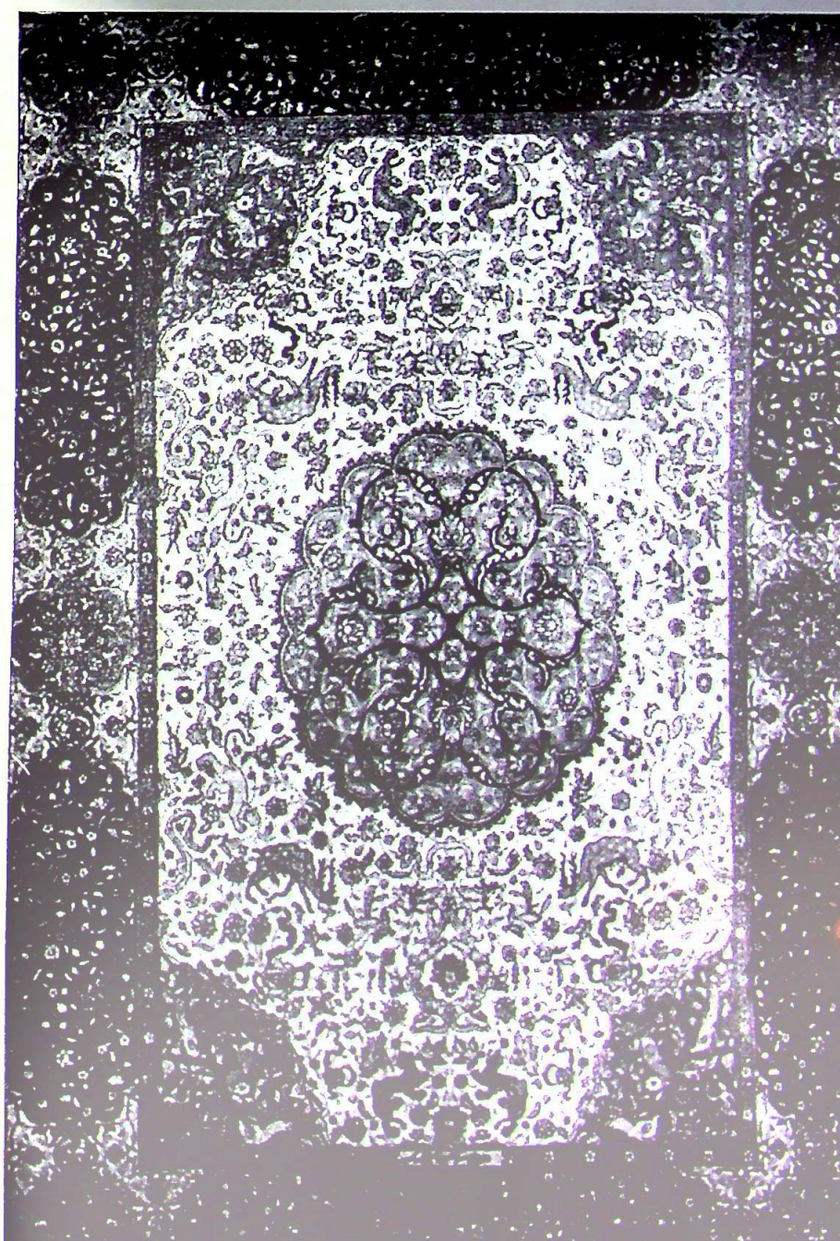
1. *Detail of the design paper. After the design is read and has been divided into squares, the designer writes down the Talim. Each sign stands for a particular colour.*
(*Photo by Jasleen Dhamija.*)

2. *A colour ticket known as "Rang ticket" with the actual dyed threads is prepared. The Talim writer now starts writing the Talim giving instructions for each stitch to be put into the carpet.*
(*Photo by Jasleen Dhamija.*)

3. *A detail of a written Talim.*
(*Photo by Jasleen Dhamija.*)

4. *The master-weaver is now given the design, the Rang ticket and the Talim. The threads are dyed according to the 'Rang ticket' and after the warp has been prepared the Talim is tied to it. The design is kept in hand by the master-weaver to check that no mistakes have been made in the Talim writing.*
(*Photo by Jasleen Dhamija.*)

5. *Complicated patterns with number of colours are even today woven in Kashmir in the finest qualities.*
(*Photo by Jasleen Dhamija.*)



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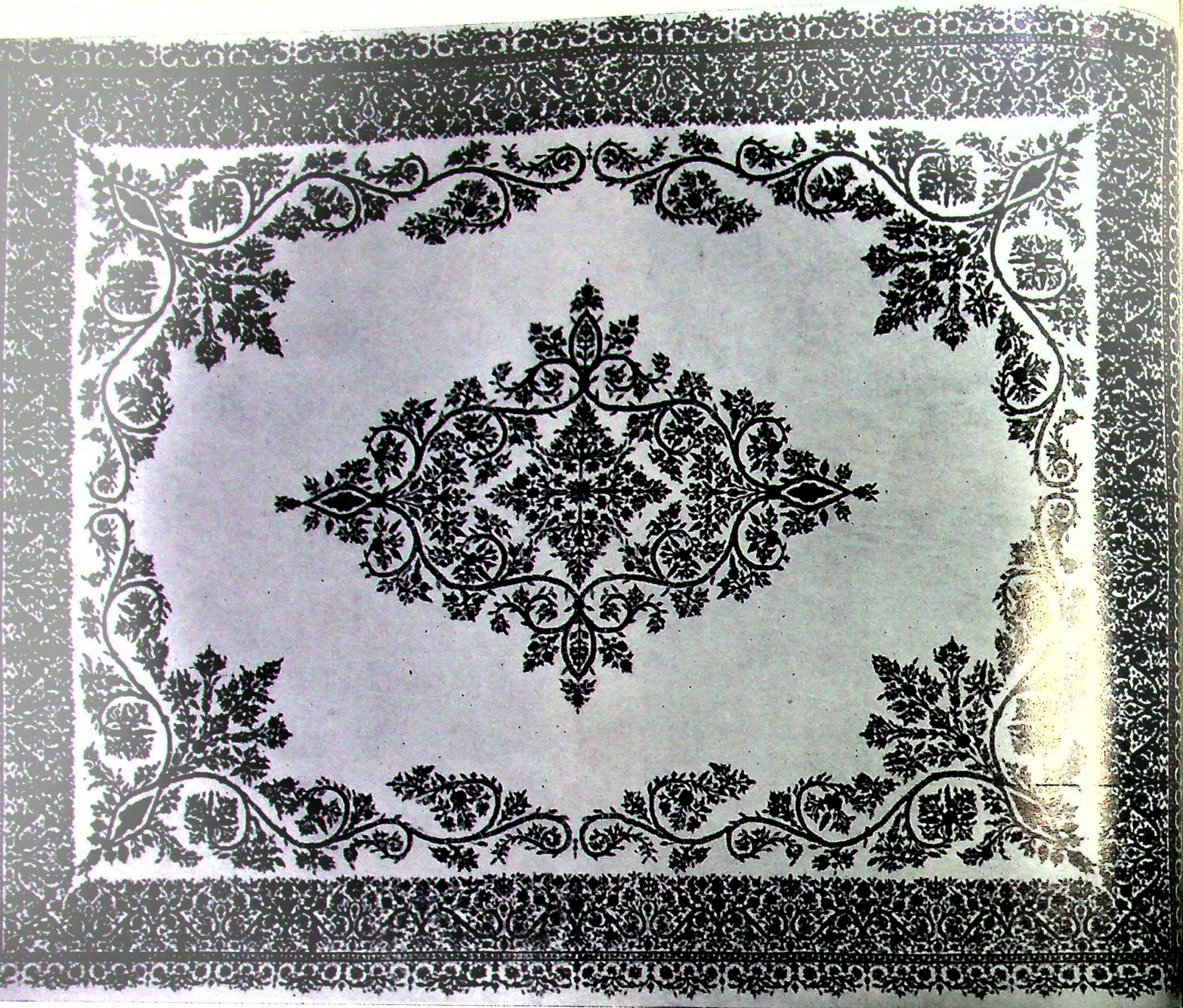

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6. *Carpet woven in Kashmir by Ghulam Mohiuddin & Son. The design is adapted from the Amli shawl and embroidered design.*
(Photo by Jasleen Dhamija.)

7. *An Isphan Barjasta which has been reproduced successfuly in Srinagar by Ghulam Mohiuddin & Son.*
(Photo by Jasleen Dhamija.)

8. *Detail of a reproduction made in Kashmir of the 17th century pictorial carpet. Note writing above which gives the name of the weaver and the place—Srinagar.*
(Photo by Jasleen Dhamija.)

HIMALAYAN REGION

A number of communities inhabiting the high mountain areas from Ladakh to Nefa prepare carpets mainly for their personal use. Weaving of pile carpets here is perhaps the oldest, for the people have been weaving their carpets from very early times. The industry is indigenous to them and has not been introduced from outside, as is the case for the rest of India.

The cold climate necessitates the use of carpets. For the carpet is the main form of furniture. The mountain people sleep on it, seat their guests on it, spread it out for ceremonies and feasts. In U.P., Himachal Pradesh and Punjab border areas the Bhotias who had been traditionally trading between India and Tibet and have always lived at high altitudes, manufacture carpets for their personal use. In North East Frontier Agency it is the Monpas of Kameng Division who manufacture carpets.

It is the women who weave the carpets on the vertical loom which is kept in the house. It is light and can easily be carried. A frame of wood is all that they use and simple wedges are used for tightening the warp threads which are looped to the beams and tied together. The usual size of the carpet 3 ft. x 6 ft.

The method of weaving and the designs used among the Himalayan people are similar. The technique of weaving is simple and the same throughout. A detail study of one area will give an idea of the technique employed in all the other areas.

The technique of weaving of the Monpas of Kameng Division in North East Frontier Agency is here studied in detail. The loom has two vertical wooden beams which have fixed pegs on the top and the bottom. The two horizontal beams are free and carry the warp threads of cotton which are tied to each other. The top beam is placed on top of the pegs and the lower beam comes below the pegs at the lower part of the vertical beam. The upper beam is now raised by wedges placed above the peg and tied to the vertical beams.

A block of wood is pushed in between the lower fixed peg and the horizontal beam which hold it in place. To make the warp threads tensely stretched a person stands on the outer edge of the beam and another pushes in another wedge. Now the warp threads are ready for starting the work.

The warp threads are crossed and the threads are kept apart by the introduction of a thin bamboo known as the *wohlu* with which they beat down the weft threads. The selvedges are produced by plain weaving with woollen

yarn thread used in the weft. After weaving approximately one and a half to two inches the pile is started.

The method of knotting is quite different from the one normally practised in other commercial centres in India. It is not the single knotting of the pile, it is more like looping of a thread with the use of a rod which is placed horizontally and at right angles to the warp. The thread is looped around the warp thread and the rod. For the initial work the thread is twisted against one warp thread looped into the pointed edge of the needle. This is repeated once or twice and then the looping or the knotting starts. The ball of wool is kept in the basket and the strand is rolled on the little finger and held by the thumb and index finger. Two warp threads are separated and the thread pushed in from the right hand side to the left, a part of the strand is held pulled to the left above the warp thread. The loop brought from the back of the warp now passes from beneath the thread held by the left hand's index finger and is pushed over the rod, the thread is pulled downwards and underneath the rod and the same procedure repeated.

This method is somewhat similar to the casting of stitches in knitting, or to the knitting done in some of the areas in Europe with the use of knitting fingers and only one needle. The only difference here is that the warp as a supporting fabric is there with which the threads are also joined. If it is a one colour line the knotting continues as described above without any cut and is brought to the edge where the thread is finally cut. The edge is rolled with the thread so as to produce a strong and regular ends on both sides of the carpet.

In areas where the motif has to be introduced the thread of the ground colour is cut and a new thread introduced by twisting into a single warp thread and looping. The threads are left hanging after the colour has been completed. After the looping has been completed a 3 play twisted wool, is used as weft and is thrown across twice. The sword, *wohlu*, which is holding the threads apart is now used for beating the weft threads down. With the help of a conical piece of wood the side of which is cut like a crescent, known locally as *Tah*, is introduced in between the warp and the weft threads are again beaten down. Lastly a hammer of wood with one edge flattened is used for beating the outer weft lines and the pile. The local name for the hammer is *Thoh*.

Now the woollen threads looped over the copper wire are cut with a sharp knife held with both hands and which has the edge at a slight angle and a wooden handle. The local name for the knife is *Khoichun*. The separate

hanging threads of different colours are clipped with scissors. The pile now emerges and is nearly always evenly cut. The expert weaver introduces single knots in different colours on the edge of the curvilinear motifs so as to get the details better and to avoid the straight or angular lines of the pattern. Here it is simple knotting.

This form of carpet weaving has a distinct character. In the description of techniques of Persian Carpets by Sir Cecil Edwards, who has entered into minute details of all the techniques, no mention has been made of this form of weaving.

For making the patterns, old carpets are kept as samples and with their help the designs are introduced. The colours are all kept in a basket and every time a new colour has to be introduced, the wool is selected from the basket and introduced.

The woman weaving the carpet normally sits on the floor and when she has woven upto a convenient height the wedges fixing the beam are removed from the side and the warp threads pulled down so that the woven carpet moves to the back.

The designs woven into the carpets are essentially Central Asians. The motifs are inspired by the Mahayana Buddhist symbolism.

The *padam* is a popular motif and lotus is used in a number of variations. The lotus is one of the eight glorious emblems which stands for the pledge of salvation and a symbol of divine origin. Quite often along with a border enclosing the four sides three lotuses are worked out in the central field. Sometimes a single lotus pattern is woven in the centre of the field.

Cloud motifs are worked together to form a border and the inside carries the dragon design. The dragon here does not signify the western conception of evil but is the harbinger of rain of prosperity and growth. Another popular design is a flowering motif each side of the carpet carries the motif and the central flower faces each other in the centre. This is the red Asoka flower symbol of Mirici and Kurukulla the yellow and green Tara.

In these carpets the entire surface is with designs not covered. The design is worked into a smaller area and an impression of space is given. The motifs are often worked out in monochromes and the outlines are sculpted with the result that a dimensional effect is given to the carpets.

The raw materials used are cotton warp and hand-spun wool for weft and for pile. Earlier indigenous colours were used for dyeing the wool. The bark of walnut trees gave a glowing brown quite distinct in its shade. For the dark red colour small red cakes made from lac in India were used. Indigo was used for blue and yellow was obtained from local flowers. Yellow dyeing and then indigo dyeing produced the green colour. Black was from oxidized iron. The colours were brilliant but always harmonious and giving warmth to the surroundings.

Now with the availability of knitting wool in different colours the design in various colours are often introduced through their use, with the result that the harmonious colour effects which were characteristic of these carpets are becoming uncommon.

At Leh, Ladakh, Jammu and Kashmir State, a training centre for training up more workers had been started and improved looms have been introduced.

In Darjeeling, West Bengal and Punjab Dharamsala similar type of carpets are now being produced by the Tibetan refugees at Dharamsala.

Himachal Pradesh had initiated at raining centre in carpets at Chamba and in Sangla, Baspa Valley, Kinnaur Dist. These centres have however not been very successful. The tradition of carpet making is with the people at higher altitudes. In Chamba Dist., for instance, the Bhotias who are settled in Pangi Sub-tehsil, weave carpets. If the local motifs and designs are introduced and comprehensive training is given to the workers they could produce excellent carpets during the winter months when only in-door activity is possible.

In Uttar Pradesh weaving is done by the Bhotias. U. P. Government has started a training centre in Almora for training women but the industry has not been commercially organised or exploited. People make carpets for their personal use and sometimes if they have a few pieces to spare they sell them during the fairs at Bageshwar or Joljebi.

In N. E. F. A. the main centres for carpet weaving are Tawang and Bombdila. The craft school at both these places have trained up a number of Monpa and Sherdukpen girls in carpet weaving and training centres are also working at Tuting, Mechuka and Changlong. The production is limited and is sold locally.

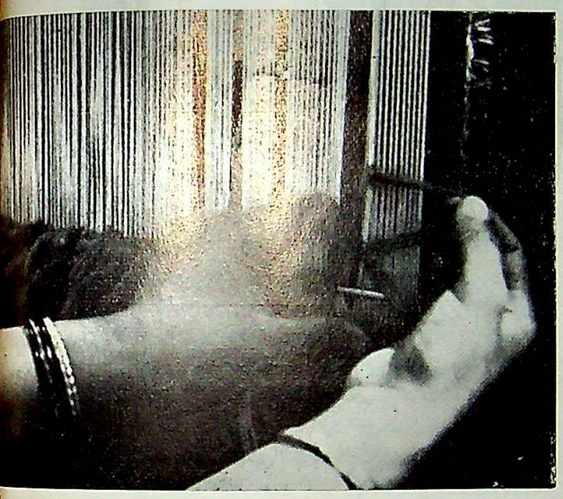
J.D.

1. *A typical carpet design of the mountain people with the dragon dominating the ground has been woven by the Tibetan refugees employed by the East India Carpet Co., Amritsar.*
(*Photo by Jasleen Dhamija.*)

2. *The weaving of the carpet is more like looping of the carpet rather than tying of knots. Here we see that the woollen thread has been looped from the right hand side behind two warp threads.*
(*Photo by Ram Dhamija.*)

3. *The loop created is now pushed over the copper wire to create the pile.*
(*Photo by Ram Dhamija.*)

4. *After the looping has been completed the weft of hand-spun wool is thrown across twice.*
(*Photo by Ram Dhamija.*)



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5. *The loose ends of the new threads which have been introduced are clipped on the loom with the help of a scissors.*
(*Photo by Ram Dhamija.*)

6. *The pile has been beaten down with a wooden hammer.*
(*Photo by Ram Dhamija.*)

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TECHNICAL NOTE ON PILE CARPET INDUSTRY

Indian carpets are made in a wide variety. The production takes place in towns and villages spread all over India, partly in factories, but largely in the weavers' homes. Since India's carpet production has been imitative of Iran, Turkey, China and France, each important location produces a wide range of qualities and designs. The same type of carpet is frequently made in areas separated by hundreds of miles.

The Indian pile carpet is essentially a floor carpet, as against a hanging carpet, or a masnad, or a saddle carpet, except against a specific order.

An interesting example of an item made to order in Kashmir is a 'choga' made of Pashmina pile carpeting, about a hundred years ago for the Nizam of Hyderabad and which is in my personal collection.

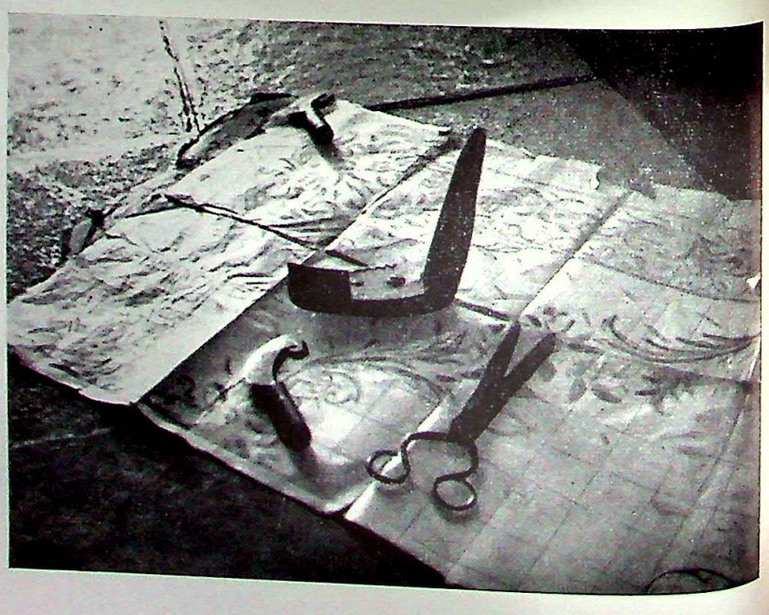
Technique:

The Indian pile carpet is a hand-knotted carpet. No use is made of any mechanical contrivance, the only tools used being a *chhura*—a heavy, curved steel knife for cutting the threads after the knot has been tied. A *Panja* or comb, made of iron, or of iron and wood, for beating in the weft and the pile tufts and a *kainchi* or a pair of scissors, for cutting the pile level. Each of these tools vary in design, size, weight and workmanship, from area to area and quite often from weaver to weaver.

All the Indian carpets are woven on upright wooden looms of traditional design. The warp is mounted on the upper beam, and the woven fabric is wound onto the lower beam, which is frequently located in a trench so that a very high ceiling is not necessary.

1. *An old carpet weaver of Agra working on the loom. (Photo by R m Dhamija.)*

2. *The implements of the carpet weavers at Warangal—the curved Chhura, the heavy Panja made out of iron and wood and the simple Kainchi for trimming the pile. The design is worked on the graph paper from which the master-weaver calls out the pattern. (Photo by Jasleen Dhamija.)*



The warp is always cotton, except for a very few carpets made in Bokhara and allied designs which have a wool warp. The use of jute as warp was tried, unsucessfully and was abandoned, which is just as well. Cotton, cotton waste, jute and wool are used for weft, in that order of frequency.

The Indian carpet is usually a wool pile carpet, though some cotton pile carpets, and a very few silk pile carpets are also made. The wool pile yarn may be hand-spun or millspun. In the hand-spun types, the admixture of inferior materials such as cotton, shoddy, jute etc. is unhappily too common.

The wools used in the pile vary greatly. The low type of short, harsh, kempy, brittle wool is used for inferior hand-spun yarn carpets. The best grades of Bikaner, Fazilka and Joria wools are used for medium grade carpets. Lustrous wool such as Australian, New-Zealand and South American crossbreds, and Tibetan, Kandahar, Ladakh and Kulu hill wools are used either as such, or in blends with Bikaner/Joria/Fazilka, for the highest grades of carpets. An ideal carpet wool is strong, supple, springy, silky and lustrous. Various wools are mixed to give the desired character to the yarn. Since the development of the synthetic dye industry, the use of vegetable and animal colouring matters has been progressively given up. Where, 30 years ago we had to depend upon Indigo, *majit* and *hakalbir* for fast blues, roses and yellows, we have now an excellent range of fast synthetic dyes available. These are comparatively easy to apply, and produce beautiful shades, though the older dyers still claim, nostalgically, with some justice, that there is no blue like Indigo, and no red like *kermes*.

In addition to these very fast synthetic dyes, the use of which is confined to the best grades of carpets, where lustrous wool has been used, a large variety of 'acid' and 'premetallised' synthetic dyes are used with complete satisfaction, in medium and lower grades.

The base fabrics of the carpet is woven in 'plain weave'. Between adjacent pairs of weft threads, a row of knots is tied, each knot being tied to *a pair of adjacent warp threads*. This is the commonest arrangement in Indian carpets. However, the following variants do exist:—

(*a*) The base fabric may be '2/2 warp rib'. (We are obliged to use expressions current in the cloth trade.) This is known as *charni-utari dam*. By this means a smoother back is obtained at a lesser cost in weft thread, but the back is thin and the strength of the carpet is lessened.

(*b*) There may be three picks of weft between adjacent rows of the pile tufts. This is known as '*teen dam*'; a smooth thin back is obtained; firmness, though not strength is imparted to the back and consequently considerable economy may be effected by reducing the pile tufts in number or thickness—without recourse to too thick a weft which creates its own problems, such as large knots of weft, uneven selvages, excessive pile yarn consumption etc.

(*c*) A pile knot may be tied on *two adjacent pairs of warp threads*—as against '*two adjacent warp threads*'. This is known as '*jut*' or '*double knot*' Notable economy is effected by this means, and in the hands of a competent weaver, no harm is done to the carpet. A variant of this is practised in Bhadohi, where a '*dutapia*' knot is tied on *pairs of alternate warp* threads.

The firmness, thikness and appearance of the back of a carpet are characteristic features. A carpet using a fairly stout warp; a stout, twisted *Tharri* (first pick of weft); a thin, soft, untwisted *Lachchhi* (second pick of weft), and having been woven in 'plain weave' show a back with pronounced ribs running the length of the carpet, fully covered with pile yarn. All the *tharri* lies straight, on top of one half of the warp threads, and under the other half, and is locked into place by the *lachchhi*, a great length of which is used—almost one and a half times the width of the carpet on each pick. Each half of the warp lies straight, and in one plane. The warp and weft are completely covered by the pile yarn. This is the famous JAIPUR or *panalidar* back in which the best of India's carpets have been woven and continue to be woven.

The Mirzapur back, on the other hand, is a smooth back without pronounced ribs. It is a thin though firm back. There is not much disparity of thickness between *tharri* and *lachchhi*, and neither is very stout. Neither of these lies quite straight and each bends in and out to allow the warp threads to lie straight, all in the same plane. The fabric is usually woven in *Charhi-utari dam*. The warp is completely concealed, but the weft is seen as stripes running across the back. Since each knot of pile appears as two pebbles on the back, where the pile yarn goes round the two warp yarns, the carpet presents a deceptive appearance of fineness on the reverse.

A refined version of the Mirzapur back is practised in Kashmir, under the name *Phiragub*, in the production of Bokharas and certain other designs. The number of knots of pile in an inch of length of carpet is nearly twice as high as in the width, thus 9/18, 12/20 etc. The appearance of the back is as of 18/18, 24/20 etc. The fabric is extremely supple, and if wool warp and weft have been used, its elasticity resembles that of suede leather. These carpets are however not very stable on the floor.

The fineness of a carpet is judged from the number of knots per unit area. Carpets are woven with as little as six knots per sq. inch, or as many as 500 knots per sq. inch, and in a few cases, nearly 3000 knots per sq. inch have been put in. These, latter, are rare museum pieces in small banner sizes. Only about a dozen such are in existence, and must rank as the finest rugs in history. All were woven some thirty years ago at the author's factory at Srinagar on a silk warp with a silk weft and silk pile. The designs are representations of deities from the Hindu pantheon. The type of knot in Indian carpets is always *SEHNA*, or Persian knot, as against the Ghiordes knot.

The cut tufts of pile stand at right angles to the base fabric, though in use or washing, they may be laid down. The length of pile tuft outside the base fabric may be as little as 1/8" in the case of fine carpets, or as high as an inch in plain, carved, or French design rugs. As a general rule, fine carpets do not exceed half inch pile height. The reason is quite simple. The greater the height of the pile,

the greater is the tendency of the tufts to scatter. All fine carpets are woven with intricate designs which are accentuated by means of guard lines or *talims* which are lines of tufts of a contrasting colour enclosing the various colour areas. If these guard lines scatter at all, the neatness of the design is destroyed.

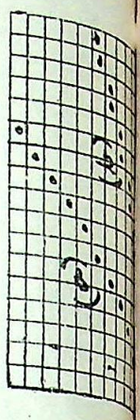
In plain carpets the weave is generally coarse and open, and the thinness of the pile is compensated for by the extra height of pile, which gives it a sort of built-in cushion and adds to the durability. There is no design to go out of order. In French and Chinese carpet designs guard lines are eliminated, and the design is accentuated by carving or embosssing the pile with a pair of scissors after the carpet is woven, in order to separate the colour areas. As such, neatness is obtained in spite of a high pile which adds to the value of the carpet, as in a plain carpet.

The best grades of carpets, using high ciass wools develop a beautiful lustre after use. However there is an ever-growing demand for carpets which have a lustre before they are put to use. This is obtained in carpets made with lustrous wool pile by the process of chemical washing, which is often erroneously referred to as mercerising. This process rapidly enhances the existing lustre of the wool by dissolving the open edges of the surface cells of the wool fibre. The fibre becomes smooth and shiny, and consequently the carpet becomes lustrous. Very severe chemical treatment is necessary, and caustic soda and chloride of lime are freely used. There is no doubt that a part of the life of the carpet is lost. The colours have to be of very great fastness to alkali and chlorine. Even the best dyes lose some depth in the process. This is, however, no disadvantage, as the carpet acquires a mellow, antique appearance.

From the very beginning, in the days of the Imperial Moghuls, the Indian carpet industry has been copying or adapting designs in use in Iran and other rug producing countries. Consequently, the Indian carpet designer uses with great skill, confidence and artistic effect such designs as the Persial Kashan, Kirman, Tabriz, Ispahan, Herez, Ferahan, Serabend or Shiraz, Kurdiah, Hamadan; Caucasian Bokharas, or Baluch and Afghan; and Turkish like Ghiordes and Kulah.

In recent times, French designs of the Savonnerie type, with their pastel shades, and naturalistic representation of flowers and vines and clusters of grapes have become very popular, but if the effect is to be artistically satisfying, great skill is needed on the part of the designer.

A little technical digression may be permitted here. The effort of every designer is to make his carpet look as fine as the quality will allow, and in fact finer. This is quite honestly secured by keeping the motifs small and detailed, and the lines thin. There is a limitation on the smallness of the motifs and abundance of detail, occasioned by the fineness of the weave, but the thinness of the lines is easily obtained if double thicknesses are avoided. The lines should be as thick as one knot-width only. Curved lines are troublesome. A smooth curve needs these double thicknesses, but if the curve is broken up into short, connected straight lines, single thickness is adequate. For this reason, the coarser grades of carpets frequently have geometric-looking motifs, as in Bokharas, Afghans, Herez etc. So far as possible, the straight lines, into which the curve is divided, are kept running either parallel to the warp or weft, or in diagonals, inclined at an angle determined by the ratio between the numbers of knots lengthwise and widthwise, per unit length. The adjoining diagram illustrates this point. The line marked (*a*) would be preferred to the line marked (*b*) because the latter appears thicker.



This does not apply to the French and Chinese designs which have to be embossed, because, there are no guard lines of contrasting colour to show thick, and much of the desired curvature is developed by the embossing. For this reason the weave of an embossed carpet is generally coarse.

In consequence of this great variety, the range of colours used is very wide. From the palest pastel shades of the French savonnerie, to the deep, rich reds, blues and golds of the oriental rug, all are here, and all are used with telling effect in the creation of a thing of beauty.

The Indian carpet industry has held its own against all comers for centuries, be they Persian weavers or German automatic looms. At heart the Indian carpet is sound. It is as well made as it can or needs to be. The structure is correct, as practice alone can evolve after generations of effort. The flexibility of design, colour and fineness is enormous. This feature alone is enough to fight off competition from such spurious objects as machine-made carpets and tufted rugs which are not worth their names, being held together with pastes, gums and resins in such delicate bond that they fall apart with mere passage of time.

Shining examples from our industry today adorn well known Museums and palaces of the world. What is the future of this industry? What do we need to develop it further? The answer is very simple. We need raw materials, dyes and chemicals, a competent design service and the aid of intelligent market analysts. Since many of our weavers, who own the carpets they make, are poor, they need credit facilities. Since the industry is mainly located in the rural areas and small towns, we need improved transport facilities. Above all we need a sound understanding of the nature of the industry and its tremendous potential as a source of employment and foreign exchange, without the evils of over-centralisation. It must be appreciated that it is a handicraft industry, and must be placed on a high pedestal. Its products must be artistic and durable. They must not be cheap. They must be good value for money. They must not be produced in such quantity that the bottom drops out of the market. There must be no attempt to compete price for price with substitutes. Given these, this industry can live and grow for generations. It is a naive suggestion that with the pressure of higher wages, the hand-made carpet must be abandoned. To say so is to equate craftsmen with machine. Money wages have gone up many many times since the inception of this industry, and still it continues to thrive. The reason is not far to seek. It is this: There is no substitute for a hand-knotted carpet in keeping your home warm, comfortable and elegantly furnished, and the Indian hand knotted carpet is the best in the world. Standardisation, though only in workmanship and quality of materials, is the need of the hour, and it is heartening to see the interest that Indian Standards Institute have taken in it.

INDIAN CARPETS IN WORLD MARKET

The manufacture of oriental carpets was introduced to this country by Akbar in the 16th century who encouraged immigration of Persian craftsmen for the purpose. Although an imported craft, yet almost immediately after its establishments at Agra and Lahore, it started looking for markets outside the country. The phenomenal growth of the industry after the middle of the last century was almost entirely due to extended markets beyond the Indian shores. Now 90% of the total annual production finds its way to the foreign markets.

Although it was the East India Company which introduced Indian carpets in the U. K. and Europe, the first to get fascination for Indian carpets were the Portuguese. The first carpets to reach the European market were Persian, though it was from Turkish Anatolia that carpets in any significant quantity were despatched to Western Europe. In fact, pile carpets were then known as 'Turkey Carpets' in Europe. But the use of carpets was still rare and till the beginning of the 17th century they were used only as ornamental table covers. Particular efforts were made to introduce oriental carpets as floor coverings during the reign of King Henry VIII, but did not catch the imagination of people to any large extent. Therefore, there was only a partial success in this venture. Hence trade continued to be small.

The first consignment of 'Lahore carpets' was shipped from Surat in 1615. Measurements of these carpets varied from 2½ yds. x 1½ yds. to 7 yds. x 2½ yds. and prices ranged between £. 2-11-0 to £. 30 according to the size. There was soon afterwards a setback in this trade as "from the results of this sale, it was obvious that only large carpets would be profitable and the Surat factors were informed accordingly. (But) the large carpets favoured by home buyers could be obtained only if specially commissioned, and even then only after a long wait. On the other hand, the commissioning of such goods in advance resulted inevitably in lower standards of craftsmanship..... As a result of this unsatisfactory position, the (East India) Company eventually decided to get pile carpets only from Persia. Thus, supplies to London dwindled in 1620s and had apparently ceased altogether by 1631." Because of the loss of this market, a new practice of commissioning pile carpets bearing coats-of-arms was started. This had been started by Sir Thomas Roe who commissioned such a carpet in 1617. Several such carpets were made after 1631. After a long period of very small despatches, foreign trade in carpets was revived. Nevertheless, the volume thereof continued to be small till the middle of the 19th century.

Great London Exhibition

The turning point in creating an extended market for Indian carpets in the West, particularly in the U. K., was the Great London Exhibition of 1851. At this exhibition, Indian carpets were universally admired for their oriental pattern, fine weave and rich colours. These were the characteristics which suited the European market which by that time had made a complete shift from table to floor carpets. Thereafter, till the end of the century, carpet trade expanded to such an extent that the industry started flourishing at several places in the country and several new centres of manufacture came into being. With all fairness to Indian manufacturers and others connected with the trade, it may be said that, by this time, Indian carpets were also well adapted to the needs of the European market and as such they could compete with the carpets imported from Persia and Turkey and create a prominent foothold in the Occidental market. There was a fall in the export trade towards the end of the 19th century because of bad workmanship and over-supply and many manufacturers lost large sums as advances to their employees. Obviously, these reasons could be mostly attributed to the fraudulent means adopted by trade and manufacturers to reap rich and quick harvest.

Soon afterwards, however, normal conditions were restored. So also, further adaptations were given effect to suit the needs of the foreign buyers and before the start of the First World War an upward trend had once again started. The export trade had to face difficulties during the two World Wars on account of fall in demand in foreign markets, shortage of raw materials and lack of shipping facilities. Following the termination of the Second World War, export trade made a fast recovery mainly because war-time pent-up demand in Western Europe, particularly in the U.K., started becoming effective. During 1946-51, carpet exports not only regained the lost ground but also established a new record.

Recent Rising Trend

Coming to the recent past, we are on surer ground to base the analysis of carpet exports on actual figures collected from the Director-General of Commercial Intelligence & Statistics. Carpet exports are the second most important group of handicrafts exports, only next to the group of precious, semi-precious and synthetic stones. Figures of exports since 1947-48 are given below:

(Value in Rs. crores).

Year	Exports	Index with 1947-48 as 100	Year	Exports	Index with 1947-48 as 100
1947-48	3.22	100.00	1956-57	4.10	127.27
1948-49	2.61	80.86	1957-58	4.10	127.20
1949-50	3.31	102.56	1958-59	4.60	142.49
1950-51	5.56	172.51	1959-60	5.02	155.73
			1960-61	4.88	151.22
Annual average during 1947-48 to 1950-51	3.68	113.98	Annual average during 1956-57 to 1960-61	4.54	140.78
1951-52	5.88	182.48			
1952-53	2.80	86.69			
1953-54	3.69	114.46	1961-62	4.38	135.86
1954-55	3.87	119.86	1962-63	4.45	137.95
1955-56	3.97	123.08	1963-64	5.37	166.41
Annual average during 1951-52 to 1955-56	4.04	125.31	Annual average during 1961-62 to 1963-64	4.73	147.74

SOURCE :—1. Accounts relating to the Foreign Trade & Navigation of India, Government of India.

2. Monthly Statistics of the Foreign Trade of India, Government of India.

In 1963-64, India exported carpets and druggets worth Rs. 5.37 crores accounting for a little more than one-fifth of the total handicrafts exports of Rs. 24 crores. During April-December, 1964, exports amounted to Rs. 4.21 crores compared to Rs. 4.09 crores during the same period in 1963-64. The above table shows a remarkable general upward trend in the carpet exports though some ups and downs are also discernible. In 1950-51 there was a dramatic increase to Rs. 5.88 crores followed by an equally sudden and phenomenal fall to Rs. 2.80 crores in the succeeding year. This abnormal tendency was due to an over-supply in relation to demand in the U.K. If this phenomenon is isolated, there is almost a continuous steady increase since 1947-48, more particularly after 1952-53. The trend of continuous growth is clearly visible from periodical average. With 1947-48 as the base year (100), average index number was 113.98 in 1947-48—1950-51, 125.31 during the First Plan period, 140.78 during the Second Plan period and 140.74 during the first three years of the current Plan. Another noteworthy feature has been smoothening of fluctuations since 1953-54. On the basis of the application of time series to actual exports during 1947-48—1963-64, it is likely, other things being the same, that the carpet exports will expand further reaching Rs. 5.48 crores in 1970.

The expansion of export trade may be mainly attributed to general rise in world demand for woollen carpets particularly in Western Europe and North America; penetration of Indian carpets into new markets; general price stability in Indian carpets during the past decade and a half which has enhanced their competitive strength; introduction of export promotion scheme by the Government of India and non-entry of U.K. into the European Common Market.

Direction of Exports

95.88% of the total carpet exports in 1963-64 were to the 3 trading areas of the European Free Trade Area (51.15%), America (32.52%) and ECAFE (12.21%). ECAFE has improved its position from Rs. 32.07 lakhs or 6.38% of the total exports in 1959-60 to Rs. 65.54 lakhs or 12.21% in 1963-64. The position of other trading areas has remained more or less stationary during the past five years though changes within each trading area have been observed.

Indian carpet exports are spread over 50 countries of the world. Of these, the 10 most important are U.K., U.S.A., Canada, Australia, Singapore, West Germany, New Zealand, Denmark, Switzerland and Belgium. In 1959-60 and 1963-64 they accounted for 96.56% and 96.74% of the total carpet exports respectively. The rate of increase has been relatively faster in the case of Singapore, Australia, New Zealand and Denmark. But on account of the total imports being much smaller than that of the U.K. and U.S.A., the rapid rate of increase in these 4 countries has not figured prominently in the overall exports. The next group consists of 24 countries who import over Rs. 10,000 worth of carpets per annum from India. Seemingly, their imports are rather not important at present but these countries are likely to witness a higher rate of increase in demand in future, and include countries which have in recent years shown a tendency for importing larger volume of Indian carpets. Of these, 16 countries whose imports have increased by 105.7% during the past 5 years are more important. These 16 countries are France, Italy, Australia, Denmark, Norway, Switzerland, Finland, Greece, Irish Republic, Burma, Indonesia, Thailand, Cyprus, Kenya, Nigeria and Sudan. Obviously, their needs should be studied on priority basis and a detailed programme of export promotion should be worked out immediately.

Importance of U.K. and U.S.A.

U.K. continues to be the biggest market for Indian carpets. In 1963-64, out of a total carpet exports of Rs. 5.37 crores, U.K. alone accounted for Rs. 2.59 crores. Of the total imports of 1.6 million sq. yds. of oriental carpets in 1961 by the U.K., Indian share was 0.98 million sq. yds. However, Indian carpets are relatively much cheaper. On an average the price of Indian carpet works out to £. 1. 7 as compared to £.7 per sq. yd. in the case of Iranian carpet. On studying the direction of carpet exports during the last 14 years, it is observed that exports to the U.K. determine the overall trend in carpet exports from India. While a little diversification of trade is evident in the recent past, U.K. continues to play a dominating role. A virtual dependence on a single country is not conducive to stability in the trade. Efforts to diversify carpet trade further may, therefore, be intensified.

U.S.A. is the second biggest importer of Indian woollen carpets and druggets. Indian carpets in the U.S.A. are liked, because there is variety in designs, colours, styles, sizes, price and quality. In spite of the fact that the consumption of machine-made carpets is also increasing at a fast rate, market for oriental carpets is likely to expand further in the near future under the buoyant conditions of the American economy. A regular flow or market intelligence and progressive shift from cheap to quality carpets would ensure a proportionate increase, if not more, in the additional demand that will be created in the near future in the U.S.A.

In Canada and Australia, India is doing well compared to other countries. Although in both countries there has been a fall in overall imports of oriental carpets in recent years, Indian exports have actually increased during the last 5 years. For instance, in Canada India's share of hand-made carpets increased from 75% in 1956 to 85% in 1963. During the same period, imports from U. K. and Iran narrowed down though there was some increase in supplies from Pakistan, U.S.A. and Japan also.

Among the big markets India is having a very nominal position in West Germany. In 1962, Iranian and Afghan carpets accounted for 90% of the total imports of hand-made carpets in West Germany. In the overall imports of 139.63 million DMS, India accounted for 0.64 million DMS only. It is a pity that even Singapore imports more than double of what West Germany imports from India. The Iranian merchants have built up an unassailable market for their ware during the last 30-40 years. Indian carpets are not having a good reputation because of low quality and lack of original designs. India cannot afford to ignore the West German market which is growing at a very fast rate.

Sizes, Prices and Marketing Methods

Two important features of Indian carpets are variety in designs, colours and sizes, and cheap price. Carpets of 12' to 15' width and 60' to 75' length are manufactured for foreign markets. In terms of knots per square inch, they range between 9 (3 x 3) knots in coarse quality carpets to 400 (20 x 20) knots in the case of fine carpets. Sometimes carpets of 3,000 (50 x 60) knots to a square inch are also made. The average price ranges between Rs. 6-7 to Rs. 100 per square yard depending upon the quality of wool, the density of pile and workmanship.

Marketing of carpets in foreign markets is done on consignment basis, supplies by Indian firms to their show-rooms and agencies outside India, and supplies against firm orders. Most of the supplies are made on consignment basis which is primarily because a major part of the inferior carpets, accounting for about 90% of the total exports, are despatched abroad under this system of marketing. It may also be noted that this system of marketing is almost wholely confined to brokers in London. From these consignments, supplies are made to the local as well as the West European markets. Its disadvantages are depression of prices, use of spurious materials, accumulation of unsold stocks and increase in the number of trade disputes between brokers and Indian exporters. Of course, it may not be easy to do away with the system in the immediate future, but its replacement in the long run is essential for developing and expanding market in the West European countries. Consequently, the two other systems, namely, supplies to show-rooms and agencies outside India and supplies against firm orders, of marketing carpets should be encouraged.

Competitive Outlook

Apart from the substitutes, the world market for woollen carpets is divided between machine-made and hand-woven carpets. Relatively speaking, the market for machine-made carpets is expanding at a higher rate, because they are relatively cheaper in prices, available in greater number of designs, sizes, shades and colours, mixed with other fibres and standardised in quality. Their arrangement for gathering marketing intelligence and passing the same on to the factory are much superior. They are in a position to take effective sales promotion measures, pay greater attention to the development of new designs and have the advantages of the economies of scale. Machine-made carpets are produced and exported by Belgium, U. K., Japan, Italy, U. S. A., Rumania, Yugoslavia, Spain and Denmark. Each and every factor attributed to the extension of market for machine-made carpets should be analysed properly and suitable measures taken to meet the competition from this sector and wherever possible to make use of the innovations which will reduce costs. Probably, the challenge from machine-made carpets could be met in a better way if all important hand-woven carpet manufacturing countries like India, Iran, Afghanistan, Pakistan etc. co-operate under the aegis of the international Wool Secretariat to take joint measures in this regard. Whatever the position might be in this regard, oriental carpets would retain their status as the most attractive, useful and economic of all types of carpets. As long as the standards of living of people in both developed and developing economies will increase the bright future prospects of hand-made carpets are ensured. But, we have to be alert and cautious to meet the growing onslaughts from machine-made floor coverings and to aim at a greater share of the increased world demand for woollen carpets.

Important exporting countries of hand-woven carpets are Iran, India, Afghanistan, Pakistan and People's Republic of China. Indian carpets have to meet severe competition in the International market from Iran. Iran is having a virtual monopoly in many markets including West Germany, Belgium and Switzerland. In U. S. A., it shares the market almost equally with India. Iran has also outshined India in several West Asian countries. U. K., Canada and Singapore are the countries where Indian carpets are having a much better position. Iran is famous for its original designs and has developed effective sales promotion measures. The quality of her carpets is superior. Whatever we despatch, even in the name of quality carpets, is only taken as imitation of Persian carpets. We have yet to evolve what may be termed in foreign markets as 'Indian carpets'. Probably, by enhancing the quality of carpets, evolving Indian motifs and designs as the central theme of what we export and by building up a progressive and modernised marketing system, we may be able to come up with the marketing strategy of Iran and meet growing competition from Afghanistan and Pakistan as well.

Although Afghanistan is a small exporting country, yet her carpets are gaining popularity in the western world. Their speciality is their originality. Even the most exquisite pieces from Afghanistan have an expression of character, which is different from the busy intricacies of Iranian carpets. Supplies from Pakistan are also limited but they are encroaching on our sales in some markets, which is mainly due to the quality of their carpets (their Bukhara designs are famous) and cheaper prices. Manufacturers in Pakistan get raw materials at cheaper prices. Exporters are given better incentives by the Government. Pakistan has introduced a bonus scheme which reduces the prices in foreign countries compared to the Indian carpets. In order to take suitable measures to meet growing competition from other countries, regular studies of competing carpets, their cost structure, production, designs and sales promotion measures seems to be imperative.

Government Assistance

Both the Central and State Governments are providing assistance to exporters and manufacturers in various ways to boost up export trade in carpets. Under the Export Promotion Scheme, carpet exporters are entitled to import raw materials, samples, catalogues etc. to the extent of 25-45% of the f. o. b. value of exports, depending on price per square yard of carpets exported. In 1963-64, the total value of carpet import entitlement licences recommended amounted to Rs. 1.69 crores forming about one-sixth of the total value of licences recommended under the Export Promotion Schemes for handicrafts. Excise duty is levied on woollen yarn. A refund of this levy is allowed at the rate of 30 paise per kilogram on the weight of woollen carpets.

Quality Marking Scheme for carpets is in operation at Mirzapur, Bhadohi, Khamaria, Shahjahanpur, Eluru and Warangal. A compulsory labelling scheme has also been evolved under which no carpets would be allowed to be despatched out of India unless a label is tagged to it giving information regarding the producer's name or Registration No., country of origin, types of dyes, quality and contents, and size. Carpets having labels would be subjected to sample check tests by customs authorities to ensure export of standard goods only. Some of the exporters have already started complying with this scheme. An Advisory Committee for Handicrafts has been set up by Government of India to advise on the measures to be taken for enhancing exports. There is also a Carpet Advisory Committee which has been set up for drawing an action programme for the development of carpet and drugget industry. Surveys of carpet manufacturing units have been undertaken in seven States. Financial help is also made available to exporters through the Handicrafts & Handloom Exports Corporation. Prominent place is given to carpets in all the exhibitions and fairs in which India participates in foreign countries. The four Regional Design Centres of the All-India Handicrafts Board have, of late, started preparing designs to suit tastes of the foreign buyers.

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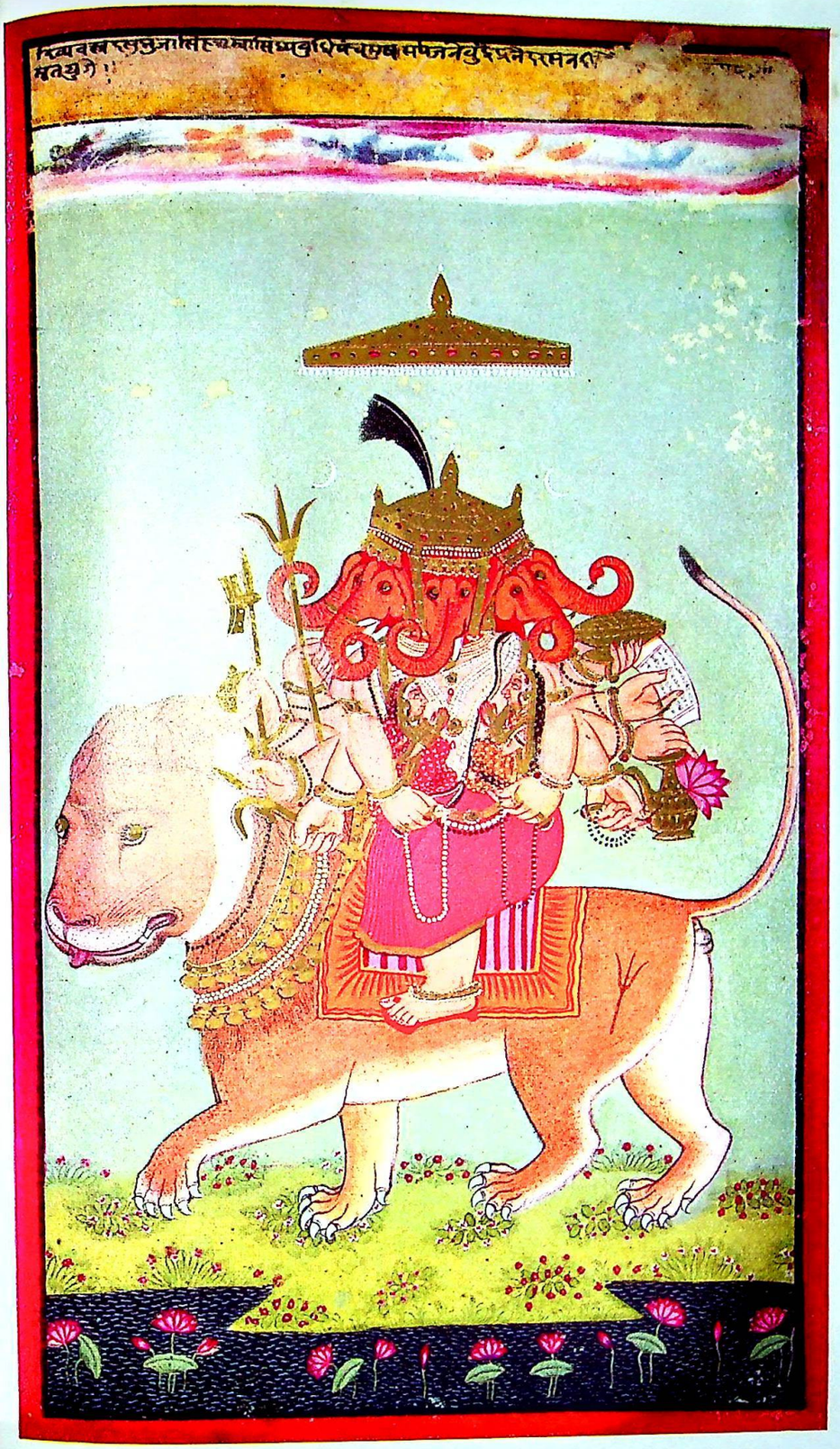

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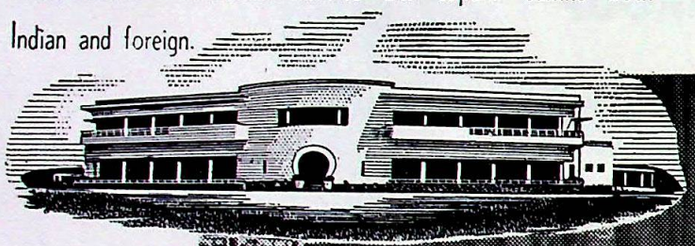

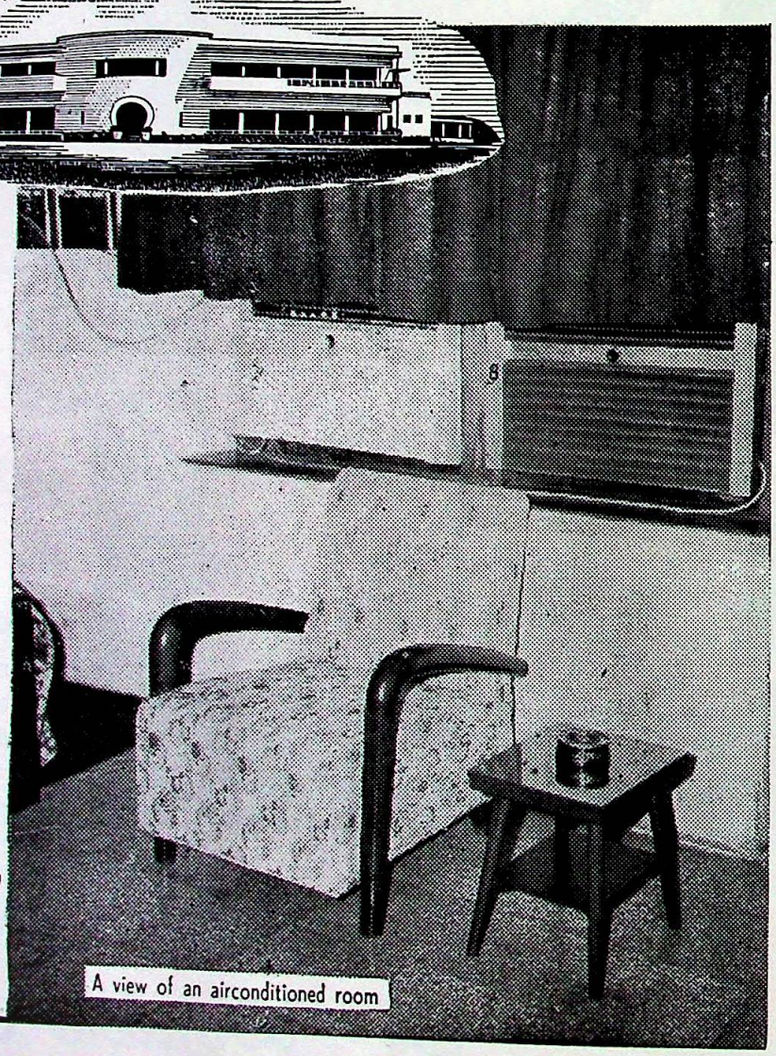

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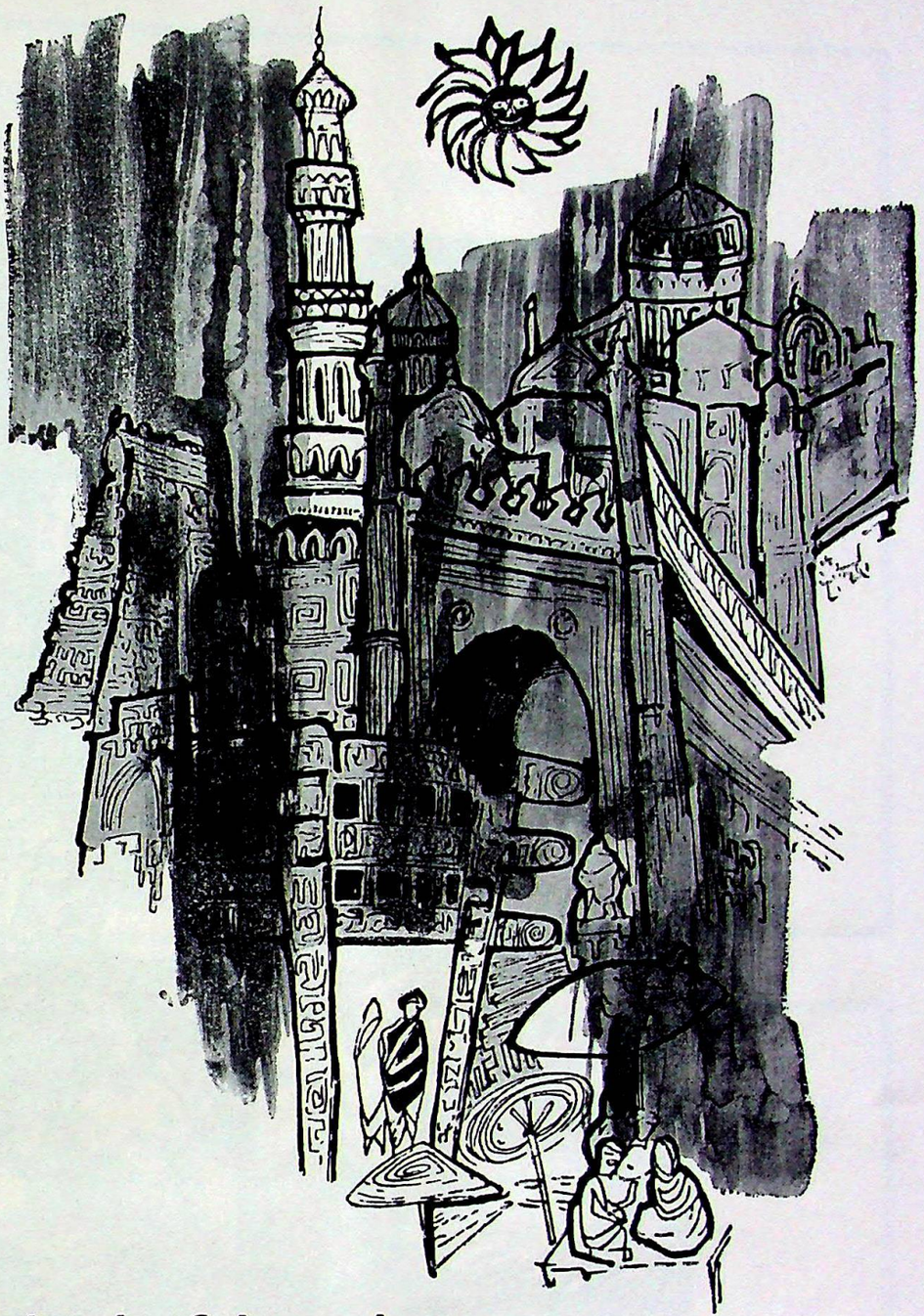

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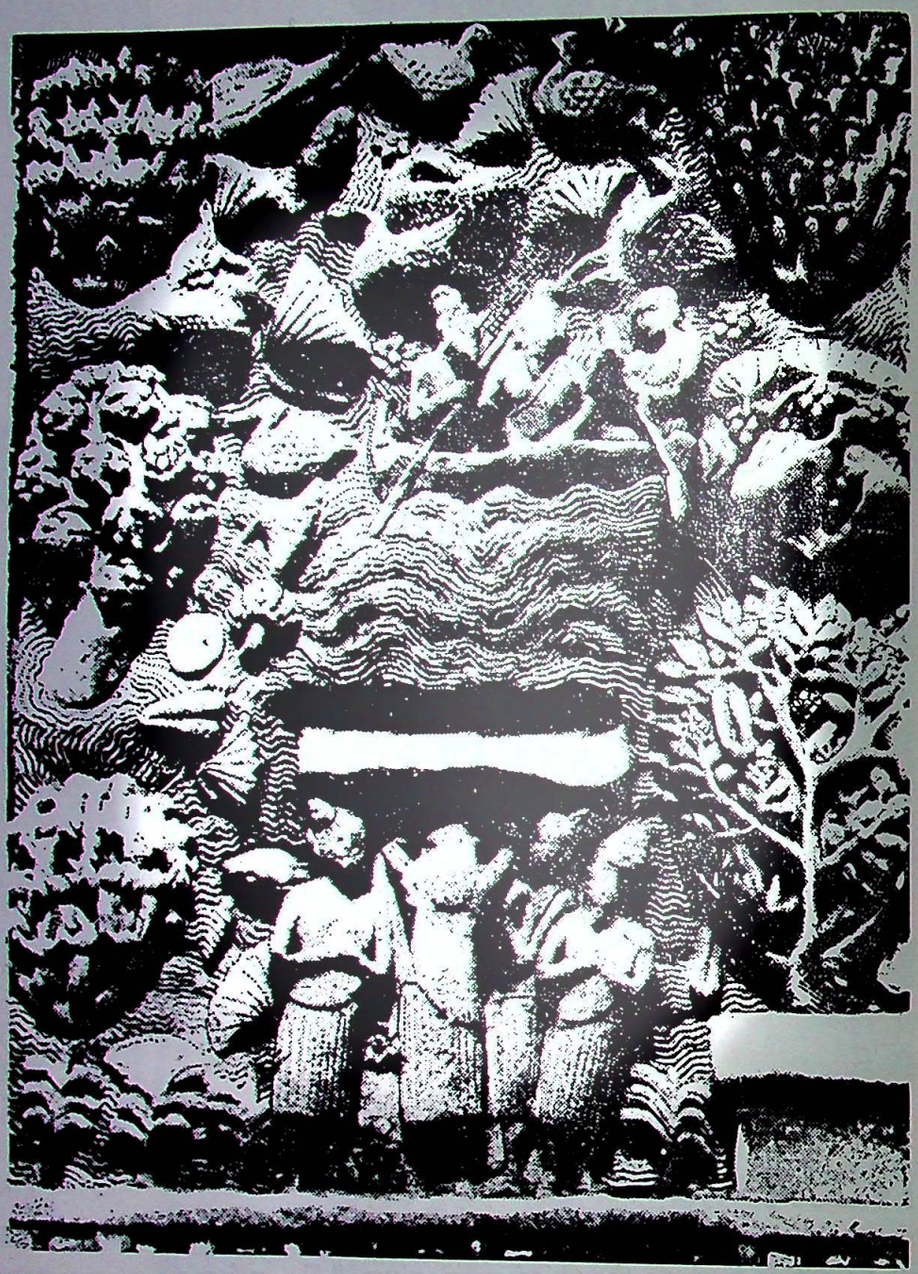

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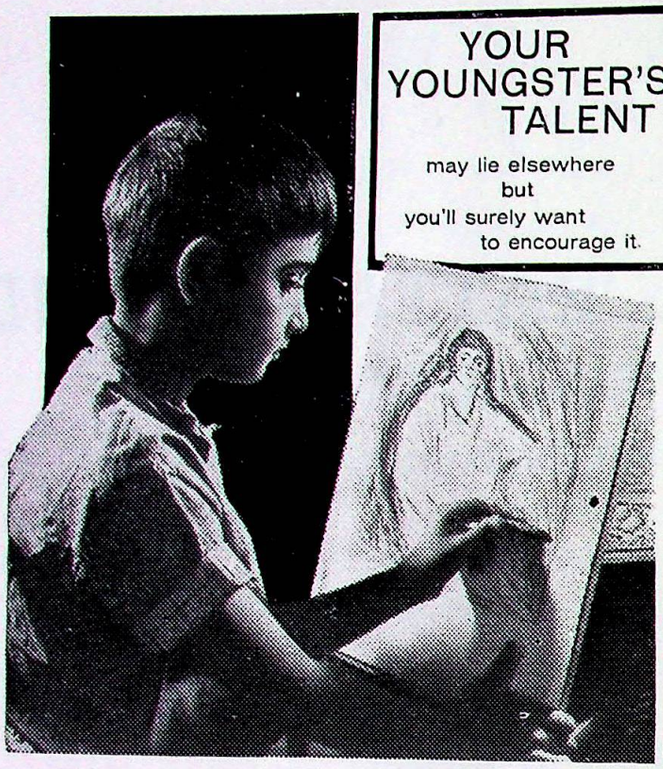

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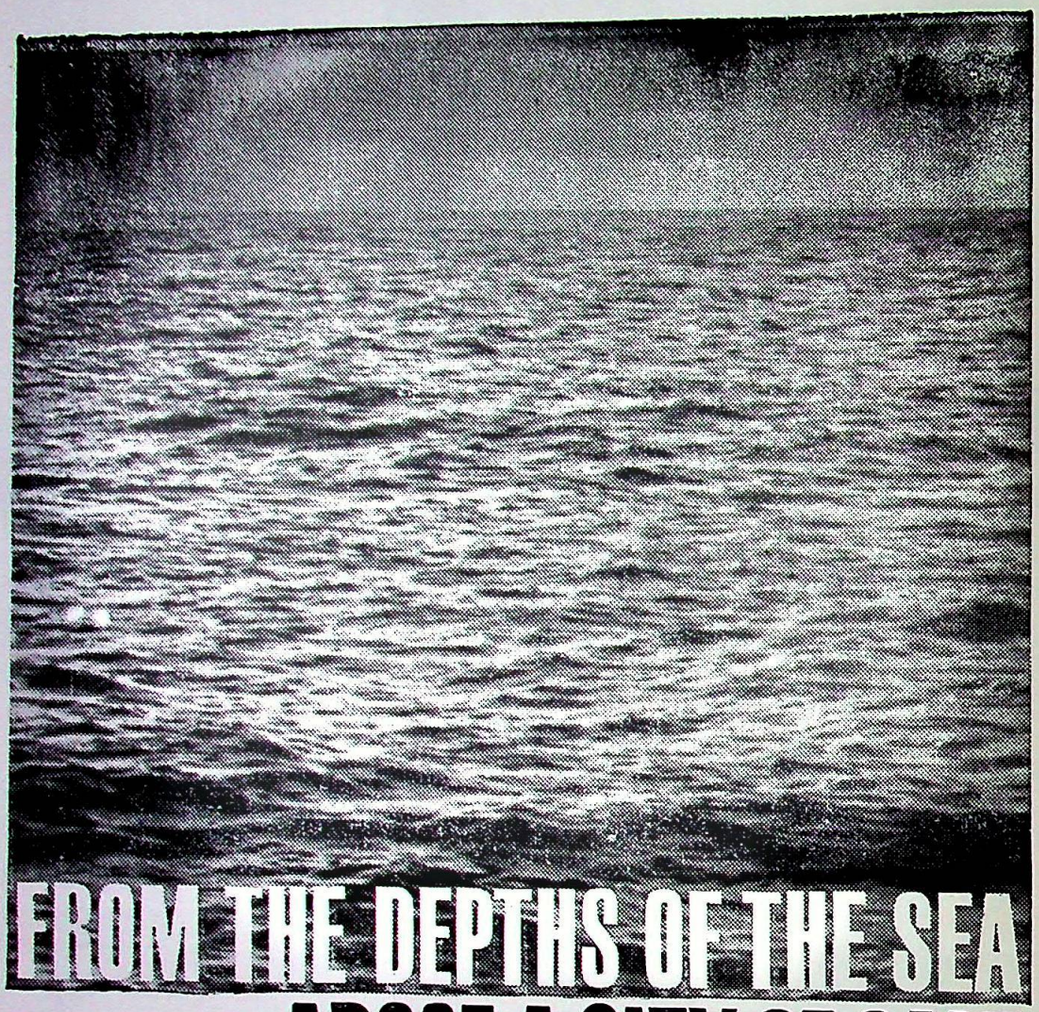

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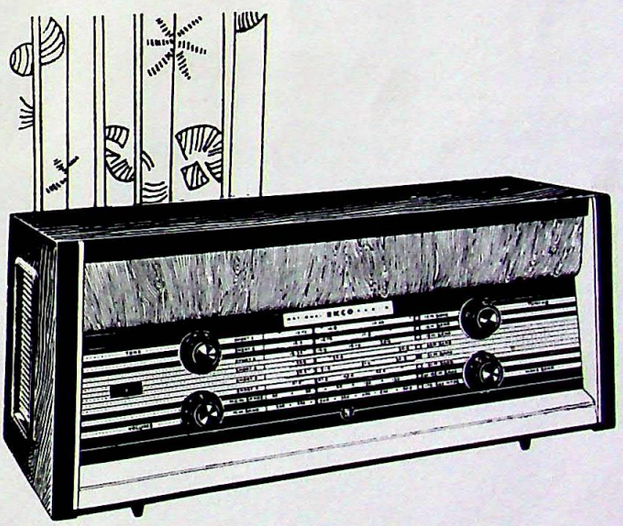

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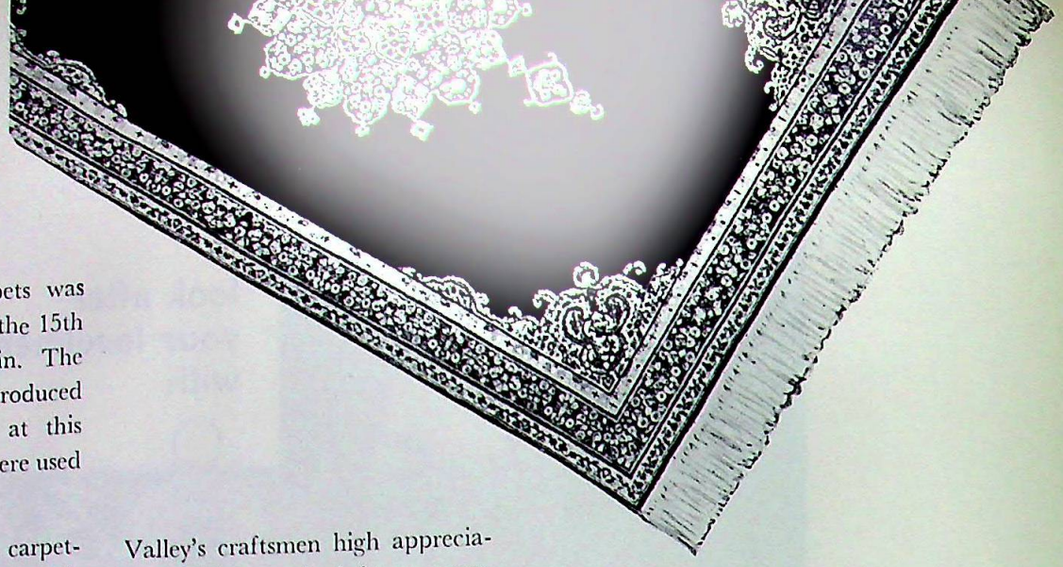

The art of making carpets was introduced in Kashmir in the 15th century by Zain-ul-Abidin. The earliest known carpets produced in Kashmir were made at this time and Persian designs were used in their manufacture.

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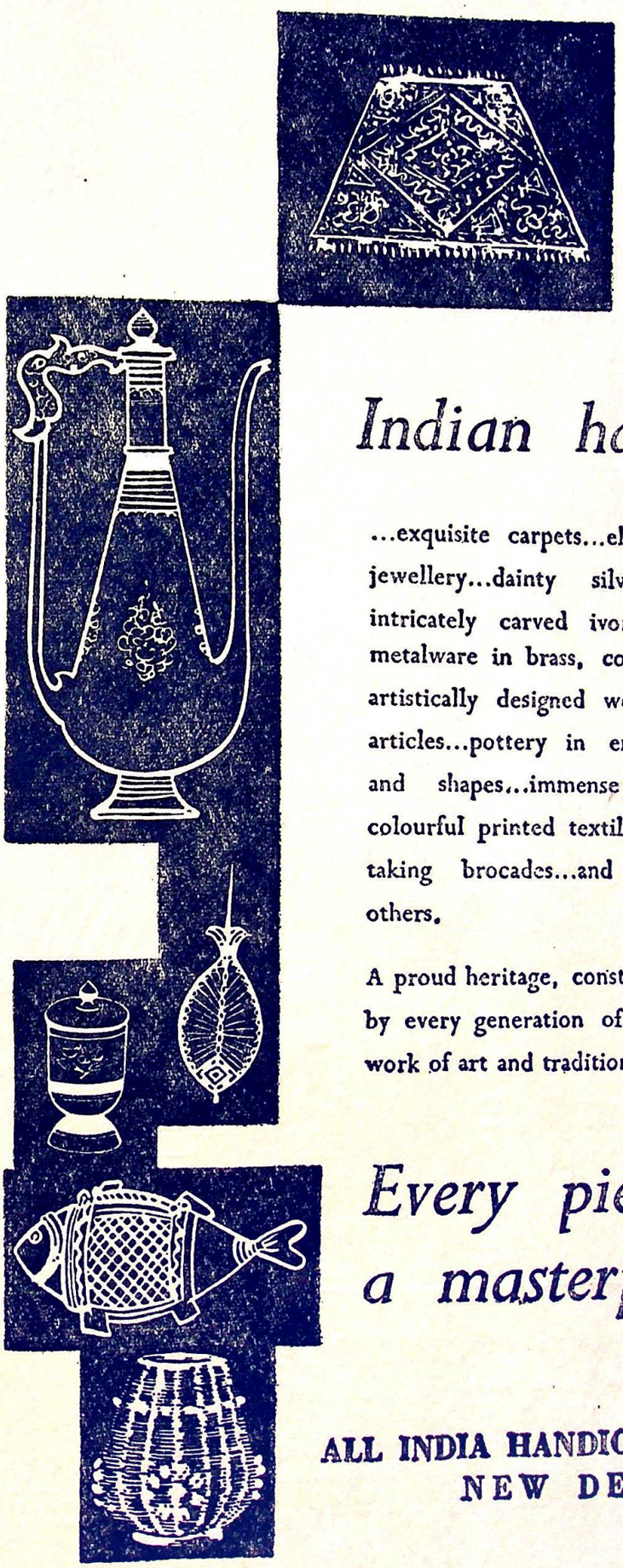

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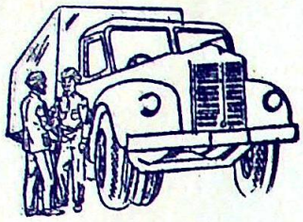

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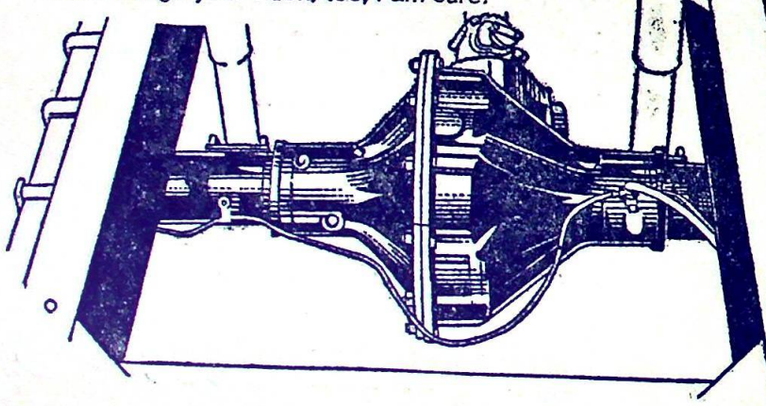

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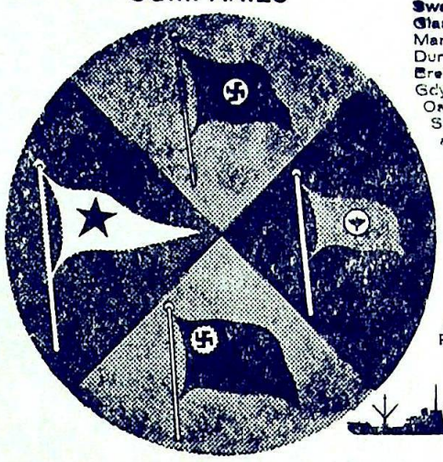

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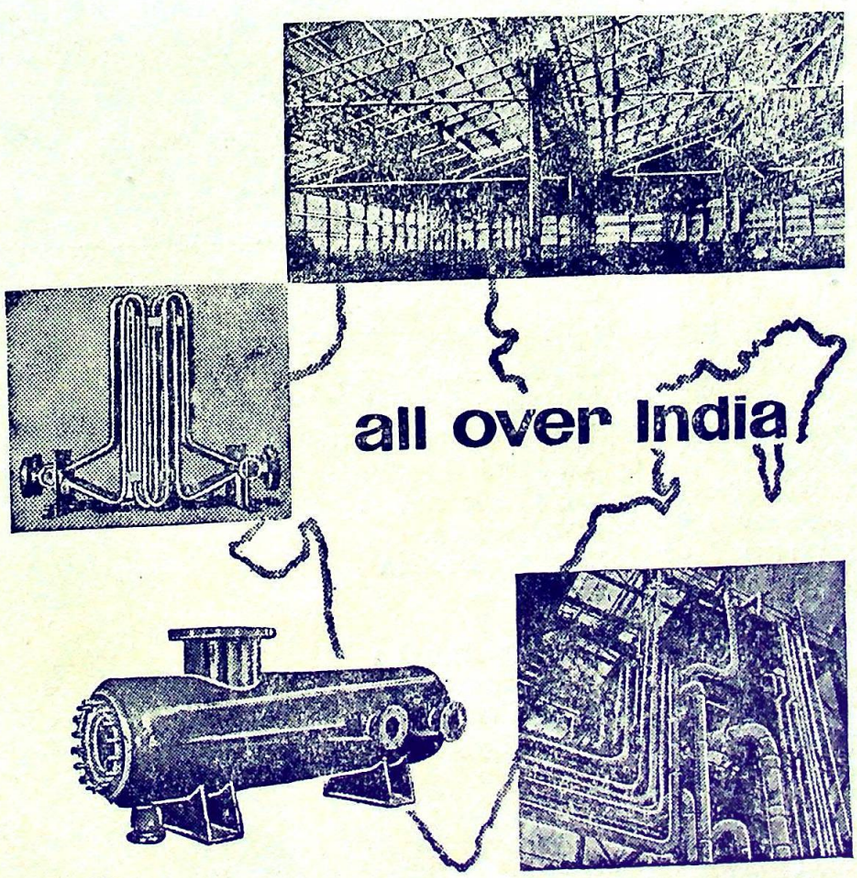
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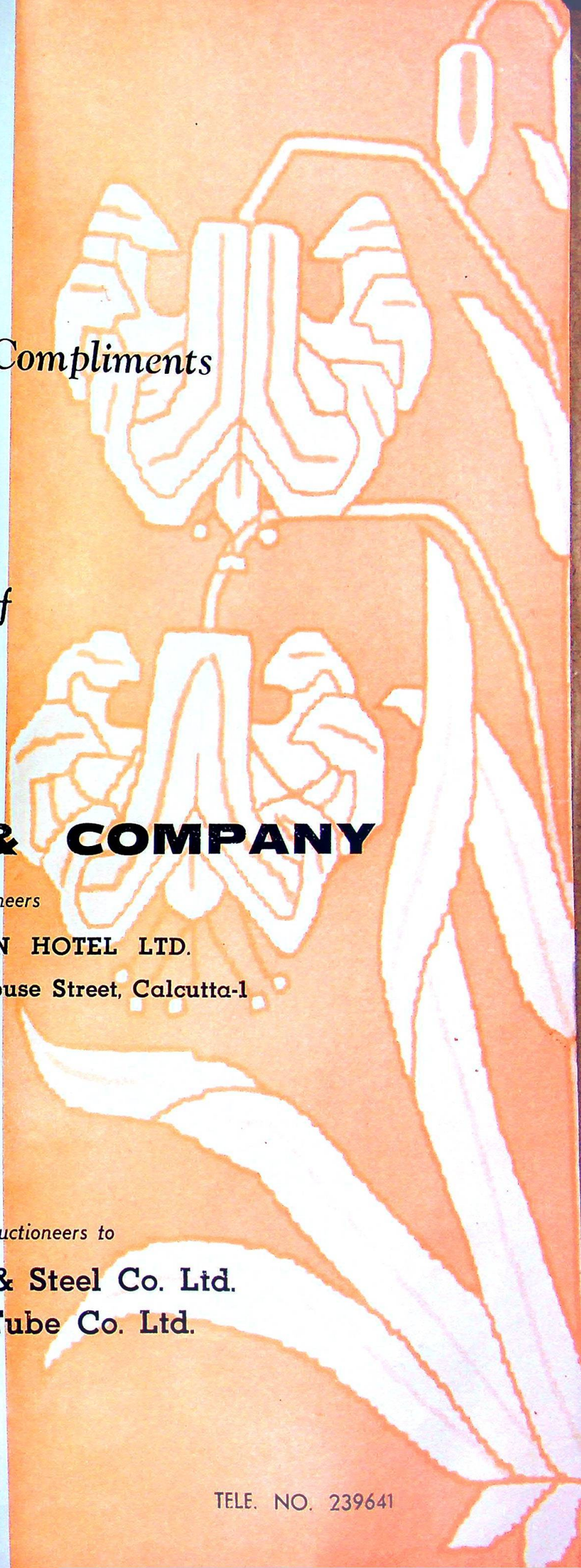

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